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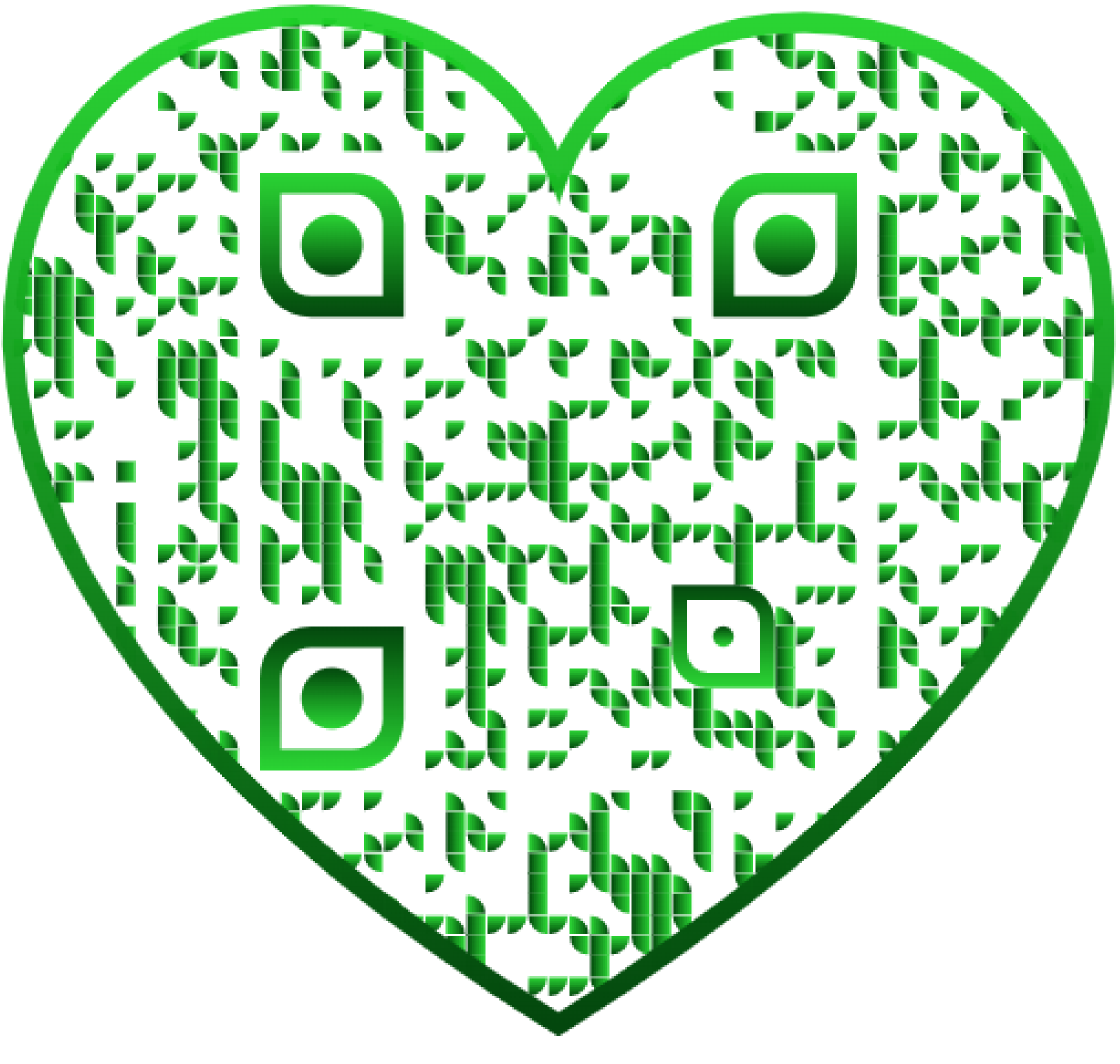

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See page 83 to find out how to download this issue's exclusive content

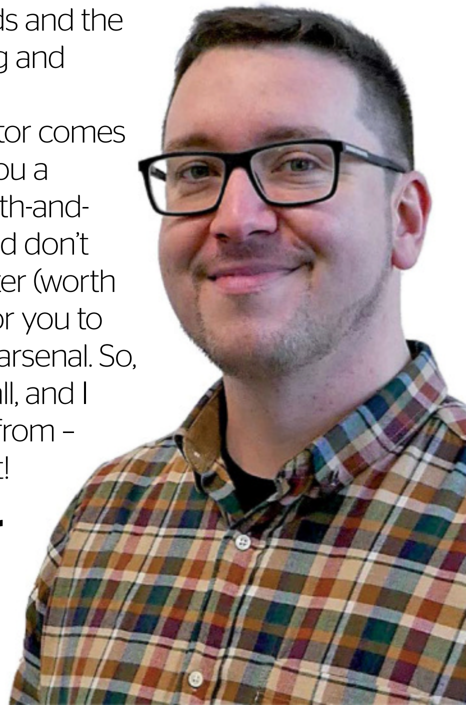
ALL NEW DOWNLOAD SYSTEM

welcome

If you're a regular reader of *Computer Music*, you'll likely have noticed that there's a new bloke where the once beaming face of Andy Jones used to be. My name is Andy Price, and much like my similarly named predecessor, music-making, production and the surrounding always-innovating industry are core parts of my life. While it's a massive honour to be taking over this important magazine, it's no undaunting task.

From its launch way back in 1998, *Computer Music* has sought to arm you with the know-how, insight and the right toolkit to make better music. It's a goal that remains unchanged as we traverse space-year 2023. As both a former reader and contributor, I know how valuable any one issue of **cm** can be. Now, it's my responsibility to make sure that each and every issue is as knowledge stuffed and beneficial as possible.

Now that you know who I am, let's talk about the very mag you now hold in your hands (or have open on a smartphone/window, if you're a digital subscriber). Our major focus this month is on the art of soundtracking. Within our multi-part cover feature, every aspect of getting aboard this potentially lucrative train is illuminated: from writing to picture itself, creative sound design trends and the economics of sync licensing and beyond. Elsewhere **cm**'s aforementioned former editor comes out of retirement to bring you a superb Depeche Mode synth-and-sequencing masterclass, and don't miss the superb Vocal Limiter (worth $20) that we've got ready for you to download and add to your arsenal. So, it's a pleasure to meet you all, and I hope you enjoy – and gain from – my first issue in the hot seat!



Andy Price **Editor**
andy.price@futurenet.com

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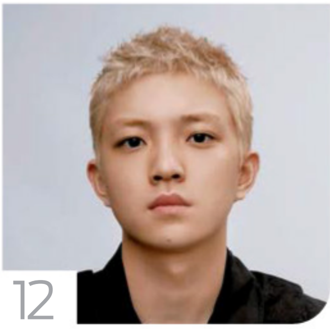
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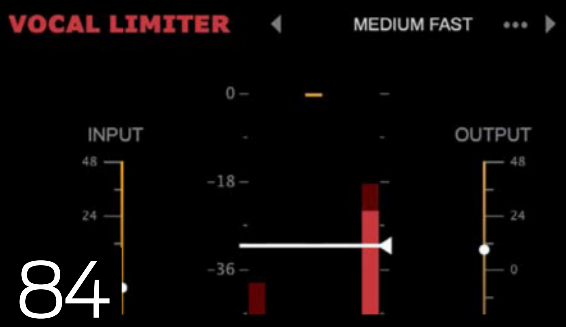

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cm/news

NEW RELEASES > COMMENT > INDUSTRY HAPPENINGS

Journey to the centre of the piano....

Heavyocity threw everything they had at this new instrument. Literally

> Heavyocity, the masters of brutal percussion, twisted piano and destructive orchestral libraries, have just launched the latest addition to their Damage instrument series. Uncharted 88 reimagines the piano as a raw percussive generator. It harnesses the Damage 2 engine and brings over 18,600 new samples, 235 playable percussion sources and 11GB of thundering loops, hits and impacts, coupled with a deep array of sound design features to the table.

In making Damage Uncharted 88, the Heavyocity team dismantled the Damage piano and reduced it to its fundamental components. The end result isn't your typical, *Moonlight Sonata*-ready piano instrument; it's an all-new way to build hard-hitting texture, anguished cinematic fury and subtle throbbing intensity. This piano's exposed strings, iron plate, wooden frame and other internal components have repeatedly been clouted by hammers, rocket rods, coins, picks, coffee mugs (and anything else laying around, by the sounds of it) to create the samples within.

Split into three sections (Ensemble Designer, Loop Designer and Kit Designer) Uncharted 88 is effectively a one-stop shop for prepared piano sounds. The Ensemble Designer has an intuitive browser which lets users load 235+ sources in octave banks or as individual sounds. There's also the ability to position your selected elements in a 3D space, and affect the instrument's tonal quality with five discrete mic positions. As is standard with Heavyocity, the inviting Punish knob wills you to choose between three levels of distortion (Gently Now, Hurt Me Plenty and Nightmare).

We've all felt emotions for plugins, but this is the first one we've wanted to offer a hot mug of tea

Within the Loop Designer you get 288 ready-to-go loops, half of which are straightforward and the other triplets. Over in the Kit Designer, you'll find access to the 16-voice Drum Kit to build unique kit variants, with independent effects chains for every voice. Heavyocity's latest has already been used by such luminaries as *Game of Thrones* composer Ramin Djawadi, who enthused, "The fresh perspective and distinct performances make for a highly playable instrument that stands out."

If you've ever wondered what a piano with PTSD sounds like or if you just want impactful, organic textures for your projects, Damage Uncharted 88 is sure to be on your 'to buy' list. It's priced at $119 (£99).

www.heavyocity.com

Forward into the past with JMG Sounds Retronaut

Dusty crinkles

Here at **cm** we're invigorated by innovation, yet sometimes we do long for a simpler time. It's just those nostalgic yearnings that JMG Sound's latest plugin, Retronaut, aims to satisfy. This multi-voice vibrato and chorus generator is modelled on the aesthetics of those old hardware units, as well as tape and vinyl-aligned machinery. Underpinning the wealth of chorus-building options, the Degrade option gives an immediate route to take your tracks backwards in time, via warmth and grit, wow and flutter and, what JMG describe as 'dusty crinkles'. Intro price is €24 (£20).

www.unitedplugins.com

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FabFilter Twin 3 is equipped with the best possible analog-modeled oscillators, award-winning filters and an extensive effects section. Sound design becomes a true pleasure with the completely redesigned, intuitive interface. Rather use presets? Twin 3 comes with a library of carefully designed, quality sounds that you can use right away.

www.fabfilter.com

App watch

We report on the latest developments in phone and tablet music making

Audiothing Dials

AudioThing has brought two more of its quirky plugins to your Apple device: Dials and Things Texture.

Created in collaboration with German experimental composer Hainbach, Dials is a unique channel strip that's based on a combination of a vacuum tube radio radio broadcast device and a beefy US bandpass filter. It promises a sound like no other and is yours for $24/£24.

Things Texture, meanwhile, is a simple granular reverb that offers pitch shifting and a mid/side mode. It's designed for adding ambience or creating drones and costs $5/£5.

Both effects run standalone and as AUv3 plugins.7.

www.audiothing.net

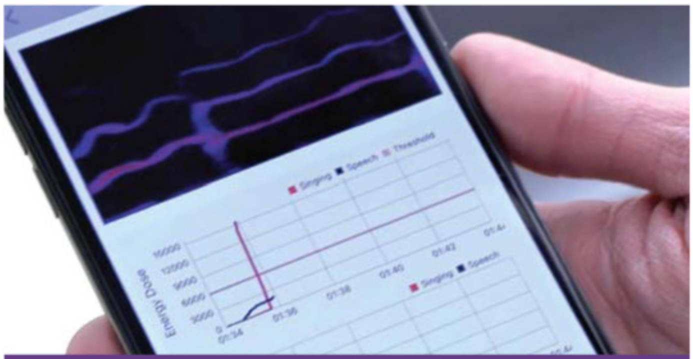
Klevgrand Tomofon

Released for PC and Mac at the end of 2022, Tomofon is Klevgrand's most ambitious project yet: a 'real audio' synth that's capable of converting audio files into oscillating waves that are then mapped to pitch zones, with each wave representing one layer.

Why are we telling you this? Because Tomofon is now available for iOS, complete with a synth engine that can continuously morph between the aforementioned layers and zones. Think of it as a cross between a wavetable synth and a sampler.

124 so-called Audio Models come supplied, delivering 180 presets. You can also import your own audio. Tomofon costs £25/$25.

klevgrand.com



Vocal health breakthrough

A team comprising materials scientists, biomedical engineers, opera singers and a speech-language pathologist at Northwestern University in Illinois have come up with a new vocal tracking system that uses a combination of a Bluetooth neck patch and an app.

The idea is that singers and other people who rely on their voice for their livelihood use it to track their vocal use so that they can ensure that they're not risking injury. Machine learning algorithms promise a 95% success rate when it comes to distinguishing between singing and speaking.

This isn't a commercial project at this stage, but the tech behind it signals potentially good things for the gigging singer.

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COMPUTER music 10 years back

Our monthly shake-of-the-head at our earlier selves' news choices...

It was Live 9 time in May 2013 (**cm**190), as we brought you a hands-on guide to the latest iteration of Ableton's DAW. We got stuck into the Glue Compressor and marvelled at the then brand-new Convert Audio to MIDI feature.

It was update central in our News section, where we introduced you to NI's Komplete 9 bundle and Reason 7. We also asked if, with downloads now dominant,

"We'd still much rather have a physical album cover than a musician's pointless NFT"

music artwork was dying. Honestly, we'd still much rather have a physical album cover than a musician's pointless NFT...

Elsewhere, we spoke to The Shapeshifters' Max Reich as the electronic music duo released their *Analogue To Digital... And Back Again* album. "As a band, we went from analogue to digital – as did most producers over the last ten years – and this album was a chance to go back and reassess the music we made," said Reich in explanation of that title. "Who knows," he continued, "maybe we can do the same thing in 2023!"

Well, we're still here, but Reich left The Shapeshifters in 2017, so maybe we'd have to speak to remaining member Simon Marlin. The best laid plans.

A stitch in time saw **cm**190 review Live 9

The art of delay maintenance

A few years back, Erica Synths' Zen Delay hardware effects unit made us go potty with its numerous satisfying rotaries, allowing us to carve rhythmic, rippling delays and time-stretching effects. Now, the same idea has manifested itself in plugin form. The Zen Delay Virtual brings everything that original little black box of tricks brought to the table, as well as a gamut of new modulation and sound design abilities. The new LFO page is capable of working up rich animations, a preset manager allows you to log your sonic adventures for further refinement, while the filter and delay routing can be customised in a variety of new ways. The ZDV is on sale now for €99 (£88).

www.ericasynths.lv

Ins & outs

GOOD SAMPLE HUNTING
Google Assistant could soon be helping befuddled music fans in all new ways; its song recognition capabilities are reportedly so good it can find the source of samples of less than a second in length. Visit the 'Sample Hunting' community on Discord to find out more.

BRIAN'S IN THE FIRE
Brian Eno has told the *Independent* that it was so hot at a 2021 gig at the Acropolis in Athens, that he kept a backup laptop in a fridge. "Here we are in the oldest theatre in the world and the world outside is on fire – the climate crisis is worsening," he said.

STRIKING AN OMNICHORD
Damon Albarn has revealed that the distinctive piano and drum beat from Gorillaz' 2001 single *Clint Eastwood* is lifted wholesale from a rhythm preset (Rock 1) from the Suzuki Omnichord, a cult instrument from the '80s. Inspiration can strike anytime.

A BIT OF A MIX UP
Spotify is getting a new DJ feature. We'd hoped it might finally let us properly mix within the app, but no such luck. Instead, it's an extension of the company's personalisation technology that curates the songs played and talks to you in an AI voice. Great.

WOULD YOU LIKE TO CONTINUE?
We're suckers for an old coin-op arcade cabinet, so we're delighted that makers of the social music creation platform Endlesss have made one for musicians. The Beat Machine lets you make music with proper arcade joysticks and knobs. It'll cost you a lot of coins though.

RIP BURT BACHARACH
He might have been known as an 'easy listening' composer, but Burt Bacharach was a brilliant songwriter, and arguably unique in his talent for turning complex ideas into pop hits. Listen to his back catalogue and you'll hear a master craftsman at work.

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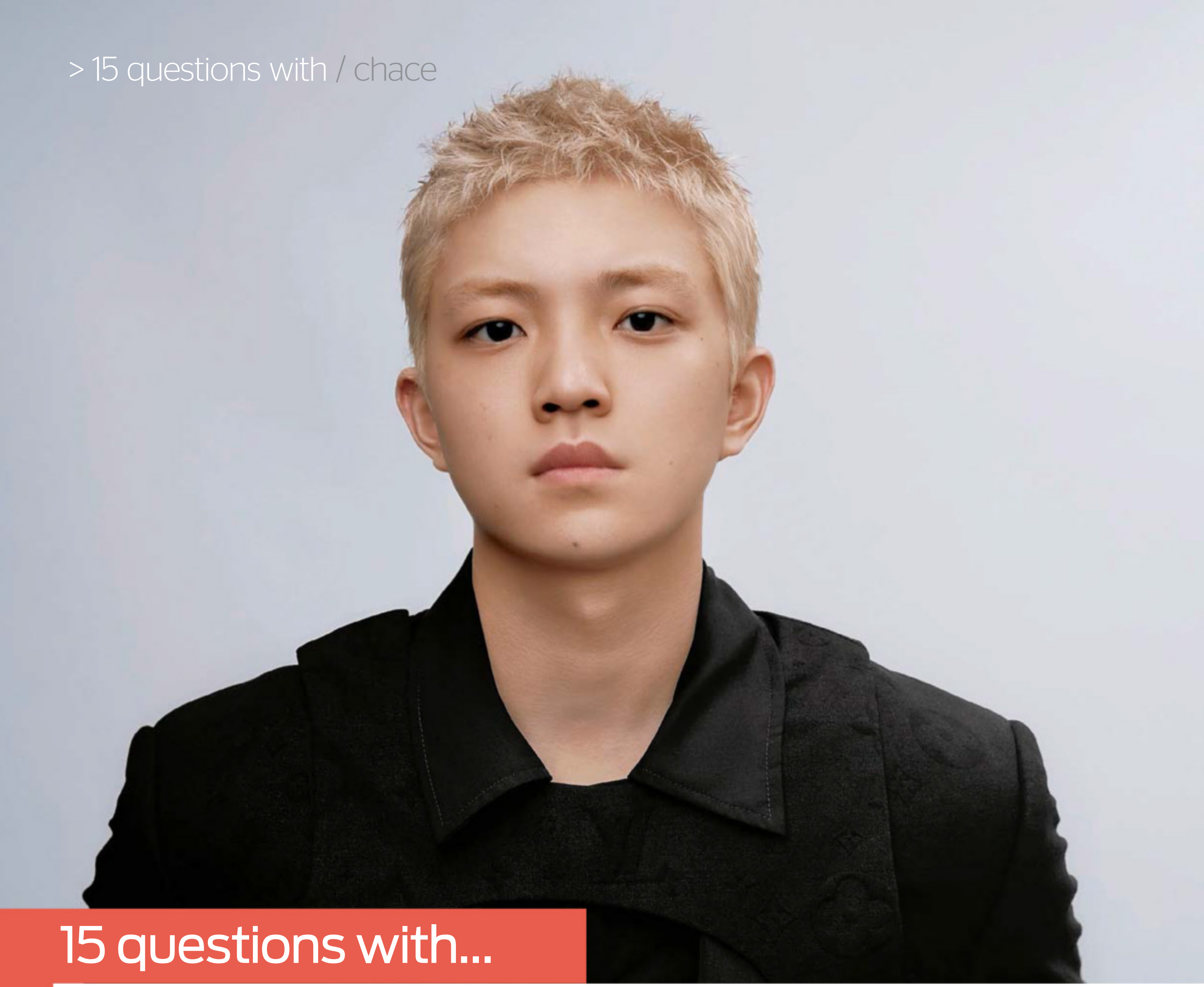


15 questions with...

Chace

As the first Chinese DJ to play Tomorrowland, Chace has already broken ground in the world of EDM. He has also been compared to The Weeknd and Disclosure. Oh and Justin Bieber, but let's not go there. However, his producer destiny might not have been fulfilled had he not started 'messing around with a computer' when he was younger...

> Shanghai producer, DJ, singer and songwriter Chace (Zhu Yihan) was the first Chinese DJ to play Tomorrowland back in 2016. Dutch record production duo Yellow Claw told *Mixmag*, "for a 17-year-old to compose, write and even sing on all of his records like he does is just mindblowing. He is heading for flashing lights and stadium status, you'll see".

And they were right. After recording the track *Stranger* with Yellow Claw, Chace has now played gigs across the globe including Festival X around Australia, Creamfields in the UK and the EDC Japan Music Festival. He released his debut album, *Belated Suffocation*, to critical acclaim at the end of last year, and looks set to maintain this momentum well into 2023. He also has some cracking advice on EQ-ing and other processing which has made us completely rethink our kick drums.

1 How did you start out in music production in the first place?

Chace: "My dad is a musician and music has been my passion since I can remember. Drumming was my main thing for years, and my father took me to get lessons that required seven-hour drives every week for seven years. I got into music production when I was 11. To my parents it's just me messing with computers so it didn't strike them as a profession at all, plus we were seriously considering applying for Berklee so things were at stake. But I kept trying to prove that it's a solid way of being creative and I was working on music for years. I eventually got their approval to let me sign to a label in Amsterdam; that's probably the start of my journey. Imagine if I didn't get to keep working with computers – I'd be a drumming teacher somewhere in China for sure!"

> "If I didn't work with computers, I'd be a drumming teacher somewhere in China!"

2 How did you start 'messing' with computers in the first place?

C: "I've always been a geek with computers since I was a kid, drawing with a computer, making website designs with Powerpoint, photoshopping, and editing GIFs of characters from the *King of Fighters*. I find messing with this stuff satisfying and fun, but it felt like a separate passion, because music at that time to me was all about drumming, and I don't need a computer to drum."

3 So when did you discover the computer music route to music production?

C: "My setup only became a *music* workstation for me because I wanted to do acappella covers, thanks to seeing a video from a guy called Mike Tompkins. He's the dude that does acappella cover videos by beatboxing and mimicking instruments with his voice. I really wanted to try to be like him because of the way he did those videos, and how he beatboxed looked so cool. I discovered Adobe Audition, which is not even a DAW, and I started turning knobs and faders to see what the whole thing is about. That was my way into production and I feel silly just talking about it!"

4 When and how would you say you became successful, or at least able to make a living from music?

C: "I got my first DJ gig when I was 15 years old. It was only for 200 bucks but it made me realise there's a way to grind. To be honest I've always tried to do less commercial work and I almost felt like I'm somehow against making money, but trying to stay true to myself and at the same

time, showing my value is a fun thing to manage. It's hard, but to me it's the way to do it."

5 What is your production philosophy?

C: "I don't read music sheets and I've always acted on feel. It doesn't matter if it's the way I hear things, or the way I play drums, or the way I produce – getting that butterfly in my gut is my cue to continue. It's funny how you learn so many things on paper and you memorise so many music theories, and later you find out the goal is to use them as little as possible, because they are for you to solve problems."

6 Tell us about the gear in your studio

C: "I have a pretty big studio – it's one big room filled with gear, and I don't even know where to start. I have many drum sets, many vintage guitars, many guitar pedals, many vintage synths, many rack units, many mics… I'm really proud of all my tools. The only rabbit hole I haven't dived down into is synth modules, and we all know how deep that one is."

7 What are your favourite plugins?

C: "Number one has to be **Pro-Q 3 by Fabfilter**. It's an obvious choice, a great EQ, and can get really detailed if you need to do some vintage dynamics or side-chaining work. I can't live without it.

"My next favourite is also a **Fabfilter**, their **Pro-L2** limiter. I've used so many limiter plugins in my time and none of them really sounded as clean as the Pro-L2 – that is if you want it to sound clean.

"Next up would probably be the **Universal Audio LA2A compressor**. It's my go-to compressor for much smoother compression and it sounds good enough to my ears.

"After that I'd say **iZotope's Ozone 9 Exciter**. It has seven saturation modes and four adjustable EQ bands with each band's own Dry/Wet mix control. What's not to like.

"Finally I'll go with the **SSL FlexVerb**. It's a new one for me, but I find myself starting to throw it on more things, the room sounds really natural, and with the right adjustments you can really blend the reverb with the dry signal, which a lot of the reverb plugins can't really achieve."

> "If you are using more than two EQs on a kick drum sound, it's probably better to find another kick"

8 How do you tend to start a track?

C: "Since I'm a drummer, I usually start with the drums and the sound of the drums is the most important thing to me in a track. The sonic of the percussion can really define the backbone of a song. I almost never start with songwriting, which is not a good thing I think, because I'll find myself being happy with an 8-hour slow-roasted production, but then my ear would get stuck, having trouble imagining vocals on it. I'm trying to get better at this!"

9 Do you have any production tricks?

C: "Lately I've realised that you really want to do as few surgical moves as possible. I used to over-EQ a kick, or over-multicompress a vocal, but if doing those things doesn't have a consistent, stylising effect on your production, what you're doing is essentially breaking the source of your sound. So I think that if you have more than two EQs on your kick, it's better to find another kick.

"Similarly, if you have more than two exciters on your vocal, change the microphone. You simply want different characteristics from your sound, so do that, and get another source that demands less surgical mixing. It's easy to feel satisfied or 'complete' when you've spent an hour on a snare, but that doesn't mean you're getting a better result than changing to a different snare."

10 How do you know when a track is done?

C: "I've had the curse of not finishing songs for years, always completing the intro-verse-pre-hook and then that's it. The thing is I like to always listen back and mix while producing. It's therefore really easy to get satisfied when I have the first part of the song, because it is fundamentally the idea of the song already, but I would have the hardest time trying to come up with bridges or second verses. The way for me to solve this issue is to try not to listen back as much. You will find yourself looping a section for too long and get familiar with it; you want to have a pair of fresh ears.

"Also, know when to stop; you don't have to come up with the final mix on day one, and it's OK to just have an arrangement and call it, mix it

Chace's top plugin picks, clockwise from top left: Fabfilter's Pro-Q 3; Pro-L2 Limiter; iZotope's Ozone 9 Limiter; SSL's FlexVerb

Chace admits to being picky with the ergonomics side of things

or as I like to call it, 'garden' it after you know the structure is complete."

11 What's on your gear wishlist?
C: "I watched a video touring Òlafur Arnalds' studio. I have to say, I'm craving my own Korg PS-3100. I spend way too much on gear, but it's never enough. But I like having this problem – it keeps me motivated."

12 What would you like to see developed in studio technology?
C: "We've got to engineer a better solution for where we put our synths! The keyboard stands that everyone uses take up too much room. The higher shelves block the panels of the lower shelves, and aren't stable. Then there's the fact that you only feel comfortable playing keys when the keys are at a certain height, so that subconsciously makes you use the synths closer to your chest."

13 Which track do you wish you'd produced and why?
C: "I don't really think that way, even if it's a song that sounds like I could've produced it, and it's doing really good. The fact that it came from someone else is always more important. It's their act, their fan base, their career momentum, their PR, their platforms – it's just never just about the music."

14 What's the best advice you've ever been given by anyone?
C: "Someone once told me that to understand music from a certain time, you should always look at the most popular genre at the moment as an antidote. Bebop music was the antidote to a certain thing, punk rock music was the antidote to a certain thing, dubstep is an antidote, trap music is an antidote, house music is an antidote, etc. Only when you find out what these music genres are antidotes to, will you see the bigger picture and understand the culture, and then reflect back on yourself."

15 What else do you have planned for the future?
C: "I'm currently diving back into the studio and making new music. I've always been trying to balance the dance music side and the more indie, live music side of me, and I think my main audience haven't really seen the non-DJ side of me yet. Figuring out how to present that is gonna be a fun new chapter." **cm**

Belated Suffocation *is out now on Fabled Records. His EP,* Destination*, on Barong Family*

HEAR MORE

Stranger (with Yellow Claw)
bit.ly/chc_stranger

Mariya
bit.ly/chc_mariya

edm.fandom.com/wiki/Chace
wwww.instagram.com/chacesound
www.facebook.com/chacesound

SECRETS OF SOUNDTRACKS

Making music for picture is now one of the most rewarding roads that a music-maker can travel. So, sit back as we arm you with the knowledge and tools to start your own soundtracking journey...

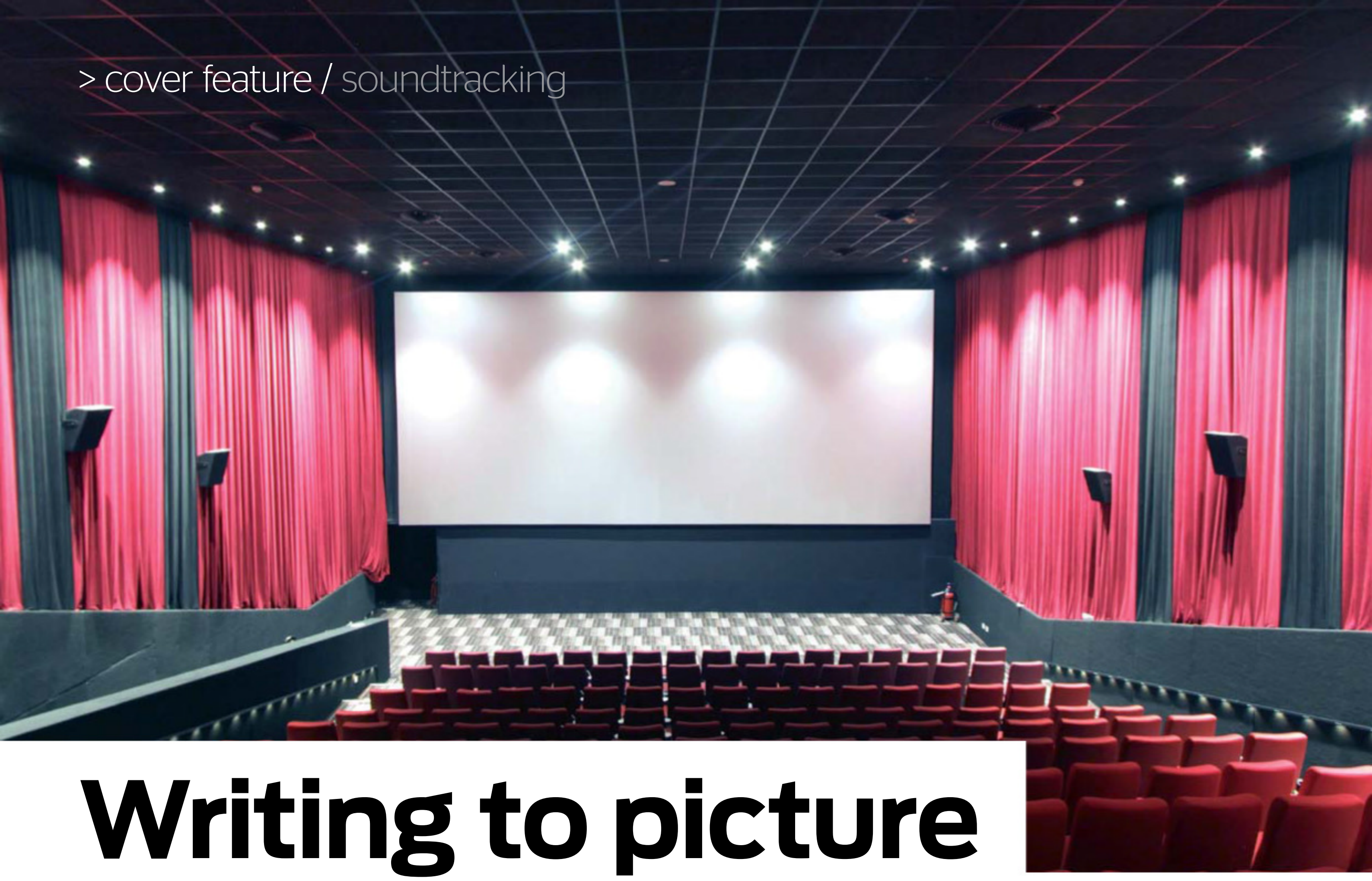
> There are a lot of issues for musicians to worry about in 2023. Whether it's anguish about the algorithmic nature of our listening habits, or those who point at the financial unsustainability of music streaming for the economic survival of artists. With all this pervading negativity, some might even be thinking of stepping away from their core passion. But, a more positive, somewhat under-shared truth is that in the modern world, music has really never been more omnipresent.

The boom in streaming television over the last ten years has been inextricably bound to the services of a growing list of distinctive composers and sound designers. Expressive composers are personally hired to infuse their own creative sensibilities into our favourite shows, films and video games.

Merely a decade or so ago, the art of writing to picture was significantly different (and significantly *harder*) than the process is now. Thanks to the rise of video-supporting DAWs and upgrades, the plethora of big budget orchestral and real instrument sample libraries, not to mention the numerous mountains of sound design-tailored effects, most of us are over-armed to begin our soundtracking journey. The sad thing is, many of us probably don't even realise it.

While conventional writing to picture is still a prerequisite for a lot of projects, there's also been a simultaneous growth in production music and an explosion in the number of sync agencies, who work tirelessly to get their artists placed. Resultantly, many thousands of musicians now make a comfortable income writing cues to more general briefs, and pitch their archives of tracks, alongside said agencies, to music supervisors on a regular basis.

Across the next few pages, we'll explore every facet of modern soundtracking, from the art of writing in tandem with picture, to the more practical must-buy lists for those who are operating in specific fields. We'll also consider the recent changes in the wider soundtracking industry, and speak to several seasoned composers. Finally, we'll look ahead and anticipate the future...

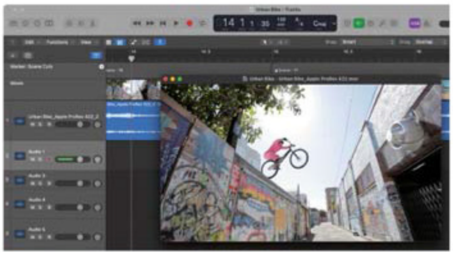


Writing to picture

Shifting to 'writing to picture' mode requires you to respond musically in conjunction with the visual events on-screen. In this first section, we'll explore some of the best practices that will serve you well during this process

In the hyper-fast world of film, television and video game development, composers rarely have the chance to live with a project for long periods of time. More often than not, soundtracks are recorded during the final stages of production, and composers are enlisted to turn around their cues within the tightest deadline. A more music-centric project might involve a composer from the very early stages, allowing them to gradually develop themes and musical ideas that grow over time. While that approach would be attractive for many, it's not unwise for jobbing composers to already have banks of mood-aligned themes, melodies and cues ready-to-go. We're going to assume you've accepted a more conventional film soundtracking brief for this first section.

Every element of your approach – what instruments are used, what genre you're writing in and even how your material sits in the wider sound mix – needs to feed off the emotional content of the film. For science fiction projects, electronic textures, synths and mechanical beats are likely going to be in play. For romantic films, you'll likely find elements like sweeping strings, subtle piano and repeated 'character' themes. On the horror-end of the scale, just think of those sharp, unnerving stings, typified by Bernard Hermann and his violin-based orchestral tension. Also, consider how nuanced sound design plays its part in contributing to the sense of dread. Some of the best soundtracks often delight in upturning the norms. But the principle is that the mood board is *always* set by the project. A composer's job is to work for the film, heightening the emotions, major themes and momentum.



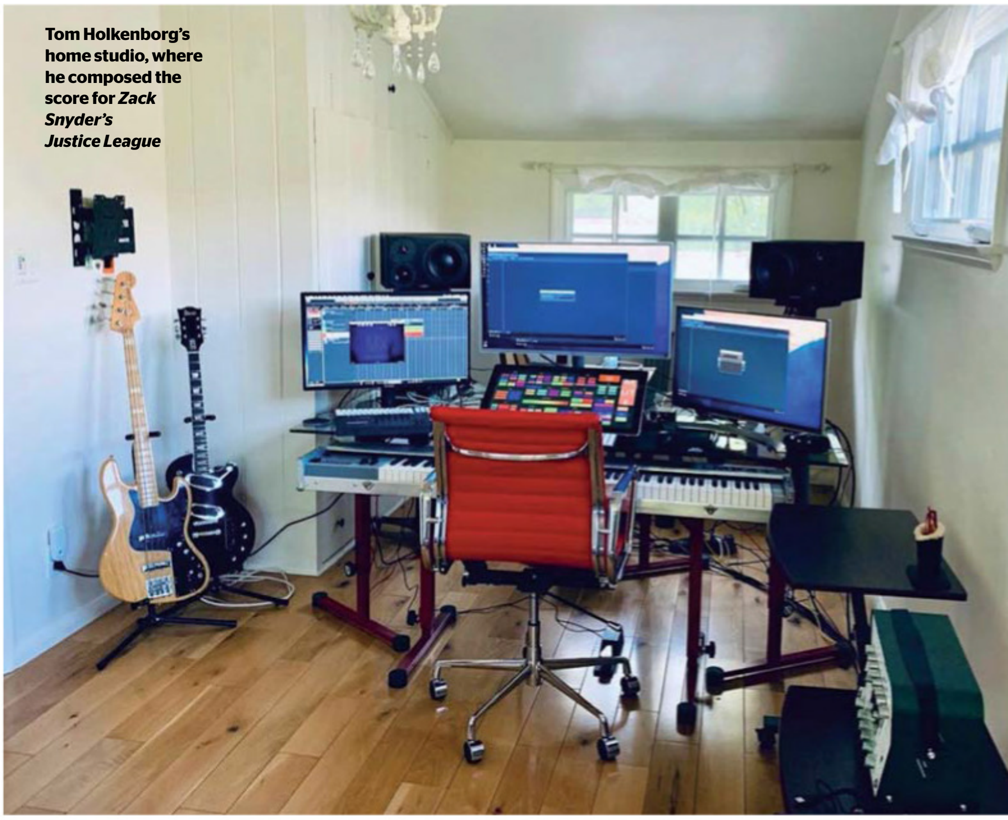
Cubase has long been considered the most solid of writing to picture DAWs, but Logic is equally great

Once a composer has been hired to take on a project, the first step is to attend what is known as a 'spotting session' where the current cut of the film or TV show is played. During this process, the relevant creatives (normally the director, writer and/or producer) will discuss with the composer how they are imagining the music at this stage – there may even be a temp score in place. For composer Oliver Patrice Weder, head of music production at Spitfire Audio and a seasoned soundtrack composer, the spotting session often leads to a flurry of creativity; "[After the spotting session] I start with a first piece of music which perhaps could be called a suite; a piece that displays the overall mood, features all the instruments I might want to use and perhaps even a main theme."

A virtuoso pianist, Weder builds his main melodic ideas using his core instrument: "A good tune is always a good tune, even at its bare bones. From there I start arranging with other instruments in line with the brief and creating variations of themes for respective scenes."

Once a foundational piece or suite has been crafted and given the green light, then comes the trickier matter of fitting the tracks into the picture itself. Writing smaller tracks that reflect and build away from your main themes, moodier or more upbeat variants can give you wider musical clay to work with.

At this stage, it's essential that you're able to work within a DAW that is able to handle video capably and without lag. An established flagship in this regard, Steinberg's Cubase (and its post-



Tom Holkenborg's home studio, where he composed the score for *Zack Snyder's Justice League*

"I want to be in control as much as I can. Every step of the way I feel I can add more identity of who I am as a person" Junkie XL

production-aligned sibling, Nuendo) is famed for its slick video incorporation, and a wide-range of tools designed to facilitate rigid writing to picture. Synchronisation between audio and visuals needs to be firmly locked in-place, so have eyes on the video project's SMPTE timecode so you know to the millisecond how to edit your cues. Should there be any discrepancy with the audio/video sync due to your display settings, Cubase allows you to offset the timecode slightly (during playback only) as well as route different audio feeds to sync with the video projects. Other solid video supporting DAWs include Logic, Ableton Live, MOTU Digital Performer and Studio One 6.

With the project loaded up in your DAW, it's time to write in earnest. It pays to keep those spotting session notes to hand, as well as any further insight from the creative team, and tonal indications from any temp track or suggested listening. That in mind, you want to infuse as much of yourself into the soundtracks as possible, so strike a balance between your own sensibilities and the needs of the project.

For the world's most revered composers, of the ilk of Hans Zimmer, Hildur Guðnadóttir, Trent Reznor or Junkie XL, applying their personal stamp on the media is hugely important, regardless of the size of their teams.

"I want to be in control of every step of the process. When I can, I love to record the orchestra myself," Junkie XL, aka Tom Holkenborg, told us recently. "I still mix all of my film scores by myself. I still master all my recordings myself, I deliver all these stems to the final product myself. I want to be in control as much as I can. Every step of the way I feel I can add more identity of who I am as a person."

While Holkenborg is at the very summit of success as a soundtrack composer, the principle of being recognised for your particular style is key to ascending in the industry. Though you might not have the same wealth of resources as Holkenborg, don't over-lean on existing soundtrack-tailored sounds, presets and libraries. Instead use them to complement your own sonic aesthetic, and build your own.

While there's been a general trend towards subtler instrumentation and sound design-adjacent approaches, it helps to have at least a few core motifs to intersperse throughout the project. They might be character-aligned melodies, or phrases that reflect a bigger theme or smaller subtext. Either way, they're powered by repetition, akin to a top-line hook in a commercial track.

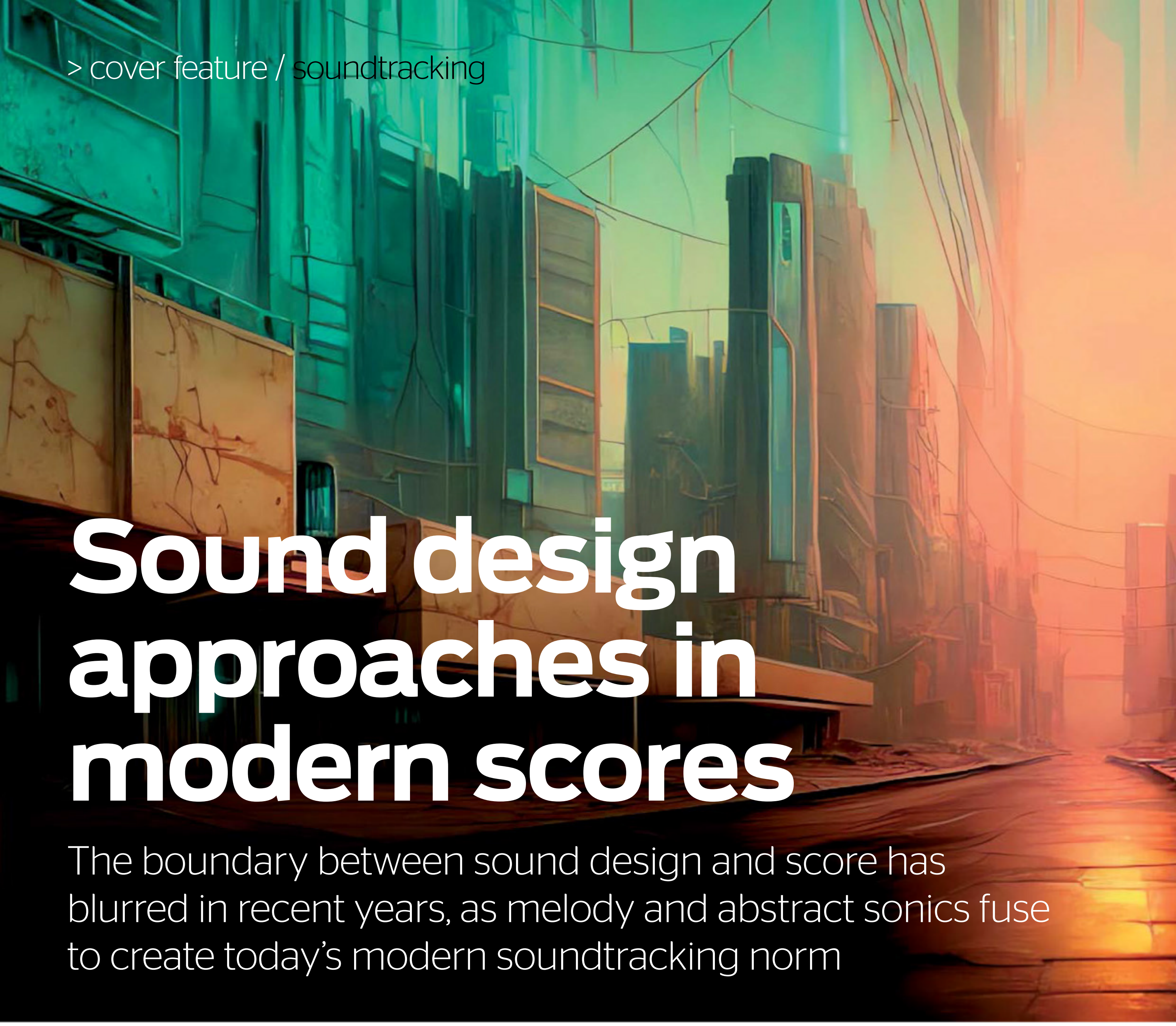
The distinctive flavour of our soundtrack needs to work for the film, yes, but if your elements are consistently characterful, then they should be able to stand on their own two feet as a consistent piece. Think of the acclaimed soundtracks for films like *Blade Runner*, *The Lord of the Rings* trilogy and *Soul* – all captivating listens in their own right.

In the next few sections, we'll shed some light on the interplay between music and sound design, look at some essential libraries and tools that every working soundtrack composer should have to hand, and explore the balance between writing directly to picture and developing a library of ready to go cues for production music and sync purposes.

Learn from the best

We asked respected soundtrack composer Jonah Sirota what advice he'd give to anyone making their first start in the soundtrack composing world. "First, don't underestimate the importance of staying up on technology and production techniques," Jonah says. "In soundtracking now, you are expected to be the one who knows how to deliver great-sounding files in the correct format and on time. I look forward to when I will have a team with a mixer, orchestrator, editor, copyist, recordist, and recording and mastering engineers. But for now with most projects, it's on me to do all of that. The other thing is that, in this field, you can be called on to do any genre at any time. But that doesn't mean that you shouldn't develop your own style, the thing you're really good at. People will hire you because of what your music sounds like, not because you can throw anything together."

It also helps to just be a friendly person to work with. Advice that Oliver Patrice Weder emphasises: "Keep your eyes peeled for opportunities, any kind. In the beginning, it's important to throw yourself out there, take any project and network when you can. But above all, be nice and cool to work with."



Sound design approaches in modern scores

The boundary between sound design and score has blurred in recent years, as melody and abstract sonics fuse to create today's modern soundtracking norm

Once a strict division, now the musical score and the sound design of a film's world has moved much closer together over the last few decades. Directors and lead creatives increasingly generally seek a more holistic approach when considering the overall aural approach. Writing soundtrack cues which aren't strictly musical, but tension-stoking or attention-grabbing events has now become standard practice for composers.

One of the most notable watershed moments in this stylistic trend was the infamous "BRAAAM" sound which first accompanied 2010's *Inception* trailer (and appeared throughout its soundtrack). Now something of a byword for a style of hyper-cinematic trailer, Hans Zimmer's deployment of ultra-sub bass and horn-like seismic events resonated deep within our senses. It promised size, it promised spectacle and more importantly, it psychologically re-sold the notion of going to the cinema as not just checking out the latest flick on a bigger screen, but being part of a physically affecting, multisensory experience in which we could immerse ourselves.

Zimmer's incorporation of electronic music techniques, processed instruments and more amorphous textures in his soundtracks has helped to popularise this mindset. The late Jóhann Jóhannsson's soundtrack for 2016's *Arrival* is another key example, fusing traditional woodwind with tape loops, heavily treated vocal effects and polyrhythms. Jóhannsson's score was written in close collaboration with the film's editor, and worked as a conspicuous character within the communication-themed movie. Johan used fragments of melody and delicately mixed vocals that eventually coalesced to sonically reflect the film's concept. To underscore the circular language patterns that the film's aliens speak, Johan reverted to a tape-based approach. "I have a 16-track analogue tape recorder [...] and created a loop, rather a long tape loop, which I used to stack layers and layers of various instruments, like piano, without the attacks," Jóhannsson told *Consequence of Sound* in 2016. "So we just recorded the tone of the piano, not the attacks."

On his *Arrival* soundtrack, Jóhann Jóhannsson emphasised the film's major theme with vocal loops

Modern soundtracking of this type goes far beyond rustling up melodic themes. It requires the composer to anticipate the intended impact of the overall picture, and be more technically involved with the editor and director to lock cues tightly with each shot. Maximising the impact of both the underlying themes, and the atmosphere of the world. Learning how to work in this way necessitates a lot of constraint too. Within dialogue-heavy scenes particularly, key lines might need some all-too-subtle emphasis, yet you need to be sure that the music you're

> Sound design is all about building new textures, and taking existing sounds and moulding them into new ones

deploying doesn't intrude in the frequency domain of the dialogue.

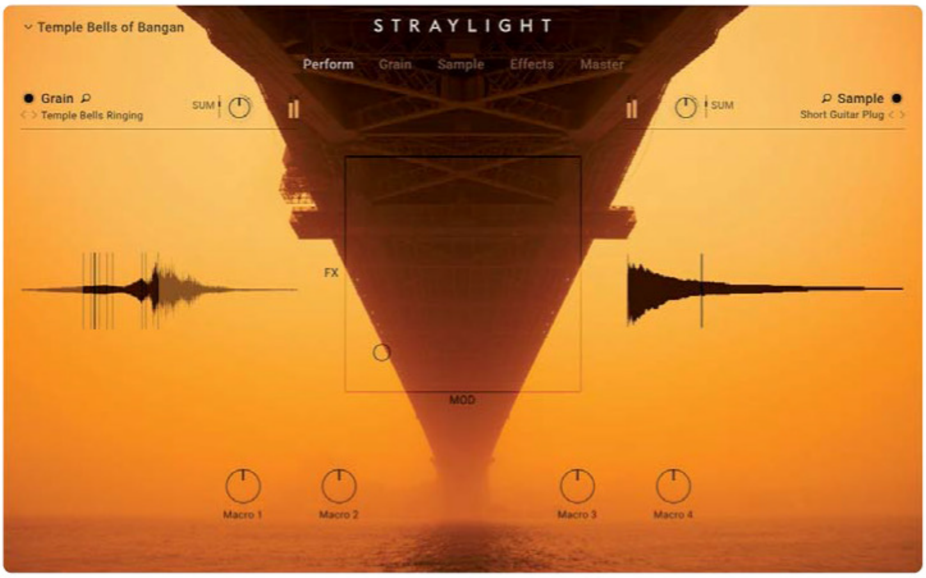
In practical terms, then, how can we transition our thinking to be able to tackle such a less musically oriented project? Firstly, it helps to experiment. Sound design is all about building new textures, and taking existing sounds and moulding them into new ones. To keep your sound original, sampling real world sounds is a great place to start. Using pitch-shifting and time-stretching plugins (such as Ableton Live's Warp or Celemony's Melodyne) you can contort these starting point sounds into characterful new shapes. Spatial effects, such as reverb, echo and delay can give both size and resonance to your sounds. As with mixing a standard track, spatial effects can be deployed to glue the more abstract sonics with the musical or melodic information that's concurrently happening.

Movement can be key to your sounds feeling like an organic part of the world. Using LFOs and slow attack/decay envelopes to build ominous, rumbling pads can create a greater feeling of immersion. Boosting and cutting key frequencies in sync with the picture is another route to sonically reflect that the sound is responding to the events on-screen.

Using these kinds of approaches, you can start generating abstract sounds and malleable texture to play with. While it's exhilarating to jump down creative rabbit holes, an eye must also be kept on the usability of this growing repository. You don't want to be dealing exclusively in attention dominating, hyper-loud cues. You need variety, and more often than not, you need subtlety. More static atmospheres are something which all filmmakers (and TV show and video game composers) aim to convey quite frequently. Increasingly, it's the sound design that plays the largest role here.

To prepare for these kinds of static atmosphere-reflecting challenges, it helps to get in the habit of crafting tracks that are designed to evoke particular environments. Think of all those animated, off-the-peg synth presets that are labelled with such monickers as 'Sad Cityscape' or 'Scorching Desert'. Wouldn't it be nice to have your own unique batch of sounds, ready to be called up as a starting point? With those types of locations in mind, having a stab at writing several three to four-minute pieces that are intended to evoke a certain geographical aesthetic is a top exercise for budding cinematic sound designers.

The fusion of soundtrack and sound design has undoubtedly heightened the experience of watching a film. While there's still much to be said for a compelling melody or magical theme, music now exists within a much more organic and all-encompassing sonic universe, being just one of many elements that work to place the audience in the same physical or emotional space as the visuals.



Native Instruments' Straylight is a superb tool that can be used to craft textures both epic and ambient

Using time-stretching plugins like Ableton's Warp, you can re-fashion your samples into compelling new forms

Pad principles

Subtlety goes a long way. Often, you might want to suggest musicality, without writing anything too kinetic. Ambient pads are a solid way of colouring your soundscape and bridging the landscape of the visuals with the score's musical groundwork. Typically, ambient pads typically are constructed using a gradual attack times, long sustains and a slow release so that the sound gently fades into the ether. Beyond reverb and delay (which are something of a given when dealing in pads) small amounts of modulation such as layered noise, filters (particularly high-pass) that slowly open and close as well as quiet, subtle arpeggios can add the right amount of underpinning throb and texture that might do wonders when sonically representing a starship bridge or control room, as well as direct the musicality of any incoming melodic cues. If things still sound a little flat, then adding some vibrato by modulating the pitch of one of your oscillators can really bring some life to proceedings, and better reflects a live instrument. In a mix context, you'll want the pad to span the stereo image. Panning each voice to different stereo channels is a quick route to building the illusion of scope.

The composer’s core toolkit

With such a massive array of soundtrack-aimed products out there, it can be tricky to know how to start. From expansive orchestral libraries, malleable atmosphere-carvers and thunderous impact engines, let us guide you through some of the best big-screen tailored tools around…

Ethera Gold provides soul-touching choirs and strings

Opus’s Hollywood Orchestrator is an instant cue-maker!

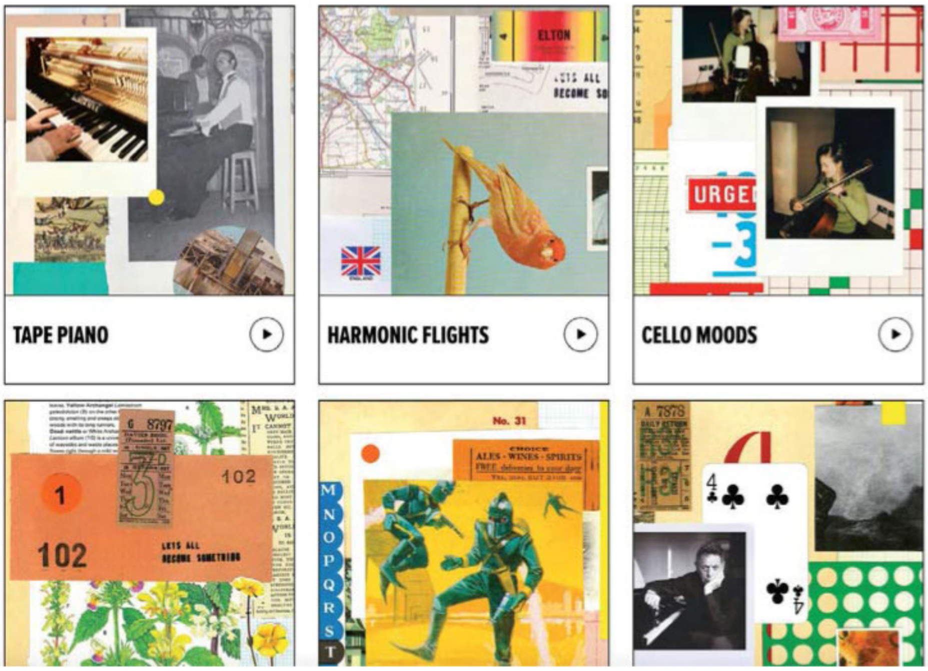
With the utmost respect for those god-tier composers that scored the films of our childhoods, most of us will never get the opportunity to stand before an orchestra and, baton in hand, conduct an auditorium full of distinguished musicians. Yet, with the increasing realism and expressivity of orchestral sample libraries, we can in essence do just that, albeit from behind a screen.

While initial forays into sampling orchestras for commercial release stem as far back as the 1980s, it wasn't really until the boom in computer-based production around the mid-2000s, when companies such as Garritan, East West and VSL brought out the earliest foundational touchstones, and paved the way for today's sample instrument landscape. These early releases sported many then-innovations that we now take for granted.

While earlier attempts at orchestral sampling were restricted by slower processing power (or locked within external hardware samplers), these newer, larger libraries allowed for greater expressivity with multiple-instrument articulations, the introduction of round robins (not repeating the same sample recording twice, aiding the perception of humanity) and the ability to help capture multiple virtual mic positions simultaneously.

> Consider them as routes to carve your own final product, and not 'soundtrack generators' to rely on exclusively

At the summit of modern soundtracking is Hans Zimmer, within his moody studio is a plethora of inspiring tools



Make sure you download some of the superb mini-offerings from within the free Spitfire Audio LABS range

In the late 2000s, computer processing adapted to a new 64-bit norm. Leading DAWs began to support the brisker speed of this faster generation of CPUs resulting in an explosion in orchestral sampling. Huge, immaculately recorded orchestras could now be rendered in real-time within your projects, and multiple sample libraries could be used simultaneously. Skipping ahead some 15 years, and here in 2023, we're blessed with thousands of hard-drive space-swallowing virtual orchestras, many of which have been refined by those companies who took that early lead on pushing this new medium to its current state.

Companies such as Orchestral Tools, Spitfire Audio, the aforementioned EastWest and VSL, Cinesamples and Audio Imperia lead the charge in the marketplace, with a plethora of exemplary products, many of which have been tailored to a particular compositional niche. Others aim to be the only package you'll ever need.

EastWest's Hollywood Opus Edition is one such example. While the addition of over a decade's worth of the Los Angeles-based company's sublimely recorded sample instruments presents a treasure trove of riches, Opus also innovates with a novel approach to using these sounds. Its Orchestrator enables users to play a few basic chords via their MIDI keyboard, which triggers the Orchestrator's smart engine to act as a creative collaborator, and shape new, real-time arrangements that complement and enhance your simple input by using the full force of its numerous libraries. If you've ever wondered what jamming out your most shabby chord sequence ideas with a world-class orchestra might feel like, this will give you a taste.

While the all-bases-covered ambition of EastWest's flagship comes with a weighty price-tag, for those who want to just augment an existing tone, Spitfire Audio's LABS range of bite-sized sample instruments are a pick 'n' mix of free, flavoursome acoustic instrument textures. From guitar harmonics, felt piano, pipe organ, choirs to the more abstract world of atmospheric soundscapes and moods, Spitfire's musician-curated series will certainly have more than a couple of complementary additions to your soundtracking toolkit. For that (non-existent) price-tag, hoovering up some LABS packs is a highly recommended first step for any budding soundtrack composer.

Spitfire Audio has also been the collaborator of choice for Hans Zimmer, releasing the titanic Hans Zimmer range of Strings, Percussion, Piano and Drums, as well as recent collaborations with the BBC and Abbey Road Orchestras. These flagship products have ushered in some remarkable advances, furthering the number of articulations, expanding the capabilities of dynamic layering, effects and becoming more versatile via high-quality mic positioning.

Beyond the traditional world of the orchestra, modern soundtracking demands pulse-pounding impacts, evocative swells and subtle

Heavyocity's Damage 2 – a brutal beast!

Heavyocity's Symphonic Destruction marries the orchestra with edgy guitars and massive impacts

momentum. Companies such as Zero G and Heavyocity are major players here.

The former have an astounding array of drone and texture creative tools, including their 'creation instrument' Enigma, the ethereal Inner Balance, as well as a large array of soul-touching vocal samples. For our money, Ethera Gold provides the best of both worlds, melding their vocal excellence with a smattering of dense wavetable synth-crafted sounds.

Heavyocity, on the other hand, have particular form for aggressive sounding instruments, impacts and processed effects. Take Symphonic Destruction, a fusion of traditional and hybrid orchestras with heavy guitars, dirty synths and colossal thumps. There's also the revered Damage 2, which provides the perfect means to sync colossal-sounding rhythms and 'punish' them in surprising ways. The company's new Uncharted 88 prepared piano library looks set to further their brutal sonic ethos.

Though there are a vast array of soundtracking tools, the best approach is to really consider them as routes to carve your own final product, and not 'soundtrack generators' to rely on exclusively. To really stand out in this crowded playing field, your own personality, choices and sonic ideas need to bleed through. Try not to ape others too much. Your music should not only serve the project, but reflect your own artistic personality. That said, all of these products are healthy additions to any soundtrackers' resource pool.

Out of the shadows

An aspect that most cinematic sound design requires is the illusion of depth and space. Processing your own repository of found sounds and homemade samples with spatial plugins can very quickly elevate them into a more epic-flavoured realm. The likes of reverb plugins such as those produced by specialists Liquidsonics and Valhalla DSP, make building the impression of cityscape-level size easy to achieve. Leaving long tails and decays is a must. A common practice is the introduction of reversed sounds which make them appear to lurch forward out of the aural shadows unnaturally. Tempting though it may be, coating everything in reverb isn't recommended – be selective!

TURN ON **INSPIRATION**

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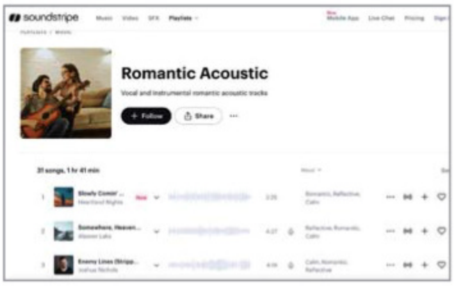
Sync and placement

Sync licensing and production music creation can be a stable route for jobbing soundtrack composers, but it can be a tricky world to navigate for those not familiar with the related rights and licensing factors…

Though working on improving your creative processes never hurts, you've probably not considered that among the many forgotten old tracks and unfinished projects on your hard drive, it's totally possible that there's some perfectly sync-able material just waiting to be unearthed. Sync licensing companies offer the means to offer up your roster of tracks to music supervisors and creatives who spend their time constantly on the hunt for the right material to fit their films, TV shows, adverts and games. But is it really as simple as uploading your tracks, and waiting for the royalties to roll in, as your unfinished jam from 2017 appears on an episode of *Stranger Things*?

Well, no. As with all matters licensing-related, there's a lot to get your head around before you open up your musical wares. Many companies are set-up to expand their large repositories of what is dubbed production music, which can then be accessed by professionals who work alongside music supervisors to find cues and mood-labelled tracks for their projects. Alternatively, there are those that work with you, and help with generating placement opportunities for your work. They will negotiate the fee and often thorny details of rights ownership on a case-by-case basis.

Typically, artists will grant a label or a production music repository (such as Music Gateway, Artlist, Soundstripe or Marmoset) the exclusive rights to licence their track, meaning nobody else can try to get those tracks on screen but them. If you're the sole composer and producer of the track, then you'll be the sole rights holder by default, owning both of the two major copyrights. The 'composition' rights indicate who owns the intellectual property behind the song itself, while the 'recording' rights pertain to that particular version/



Soundstripe provides stock music, SFX and more

You don't want to be handing over multi-sectioned pieces with a shifting or ambivalent mood

recording of the track. You'll typically be able to keep these when working with a sync library, yet their role as the 'publishing administrator' of the track(s) in question nets them an agreed-on percentage of any income the track generates.

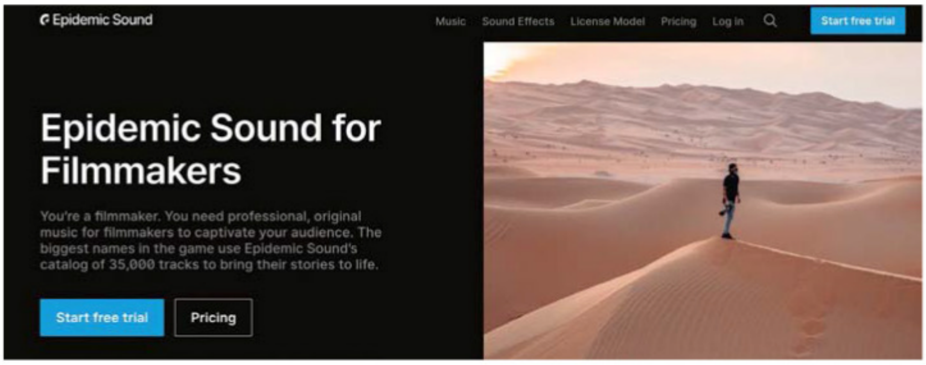
With this in mind, let's think about how we approach actually *making* production music. While there's no reason to be any less inventive, you'll want to write to a more general idea of a tone. Most production music archives are vast, and are tagged with numerous keywords that usually align to a mood. Keep this in mind, and try to write numerous pieces around the same thematic objective. For example 'sad', 'optimistic' or 'ethereal'. You don't want to be handing over multisectioned pieces with a shifting or ambivalent mood. Speaking to *PRS for Music,* production music composer Melody Girl said one of the greatest challenges was crafting music that could potentially suit a wide-range of projects, yet maintains character. "You're trying to create flexibility in the music - something that will work for a variety of different situations and nuances - but at the same time trying to avoid the result sounding like musical wallpaper."

To be successful writing production music, you really need to break out of your own musical comfort zone, and try working in different genres, or moods you've previously not delved into. It stands to reason that the more tracks you have out there, the higher the likelihood that they will be used. Most production music composers submit full albums to labels and agencies, as opposed to standalone tracks. These types of records usually keep to a tight theme, with a range of options for music supervisors to navigate through and find the right fit. Aim to have a healthy output of production music albums, yet make sure you demonstrate a consistent musical identity.

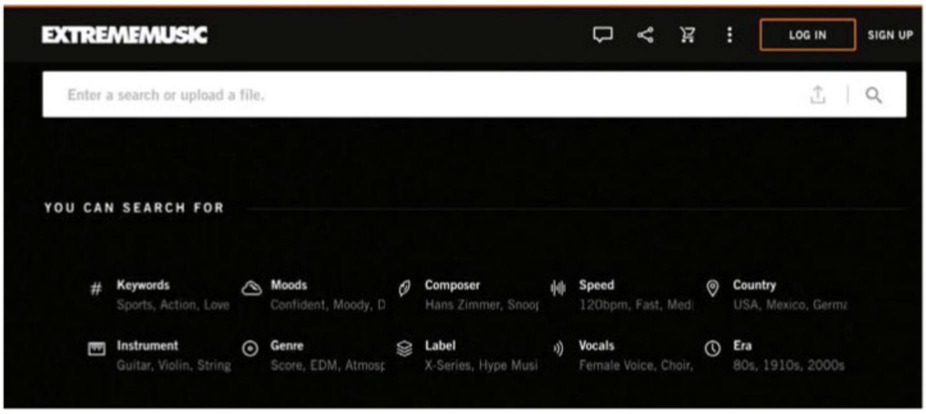
On a housekeeping note, you need to make sure you keep every single project for every track securely saved, as you might be requested to submit shorter versions (or a tightly-timed version that better fits the specific scene it's scoring) You might also need to remix, or remove, key track elements.

Though some commercial sample libraries can bring weight and sophistication straight out of the box. Using their preset, or dry, sounds might sound a little unoriginal, particularly if you consider that there's likely to be many other people out there leaning on libraries like these to do the heavy lifting. Those who work in the industry are therefore very likely to recognise the tell-tale signature of commercially available libraries. So, using these dry samples on final projects generally isn't advised, not without significant processing at any rate.

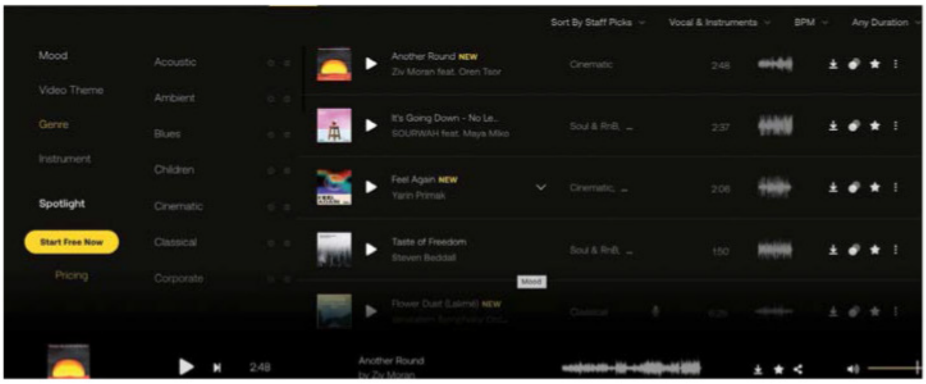
Finally, for budding production music composers, make yourself a rigid plan and schedule. Depending on how many tracks get picked up, writing production music could form the bedrock of a very healthy income. So if you want to get into the game, you'll need to treat it as a disciplined job. Have clear objectives and set yourself a timetable for completing albums and sync projects. Try not to write loosely, and instead concoct a word-based roadmap of emotions you want each track to hit, this can give you the direction that you're missing out on by not working with visuals.



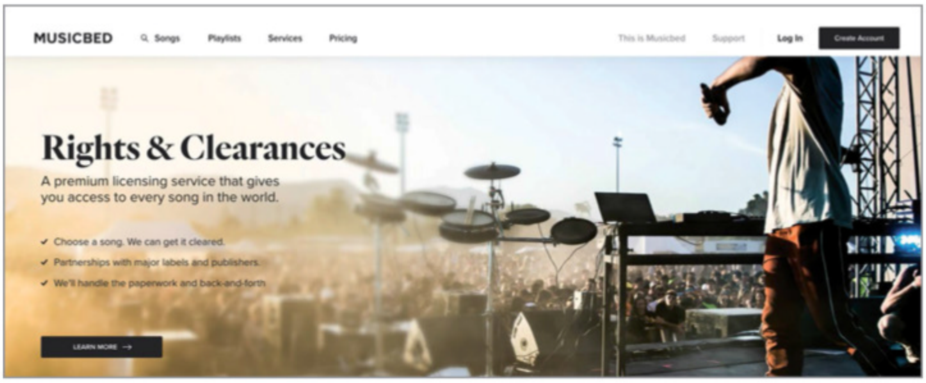
Epidemic Sound is one of the most well-subscribed repositories of cinematic tracks



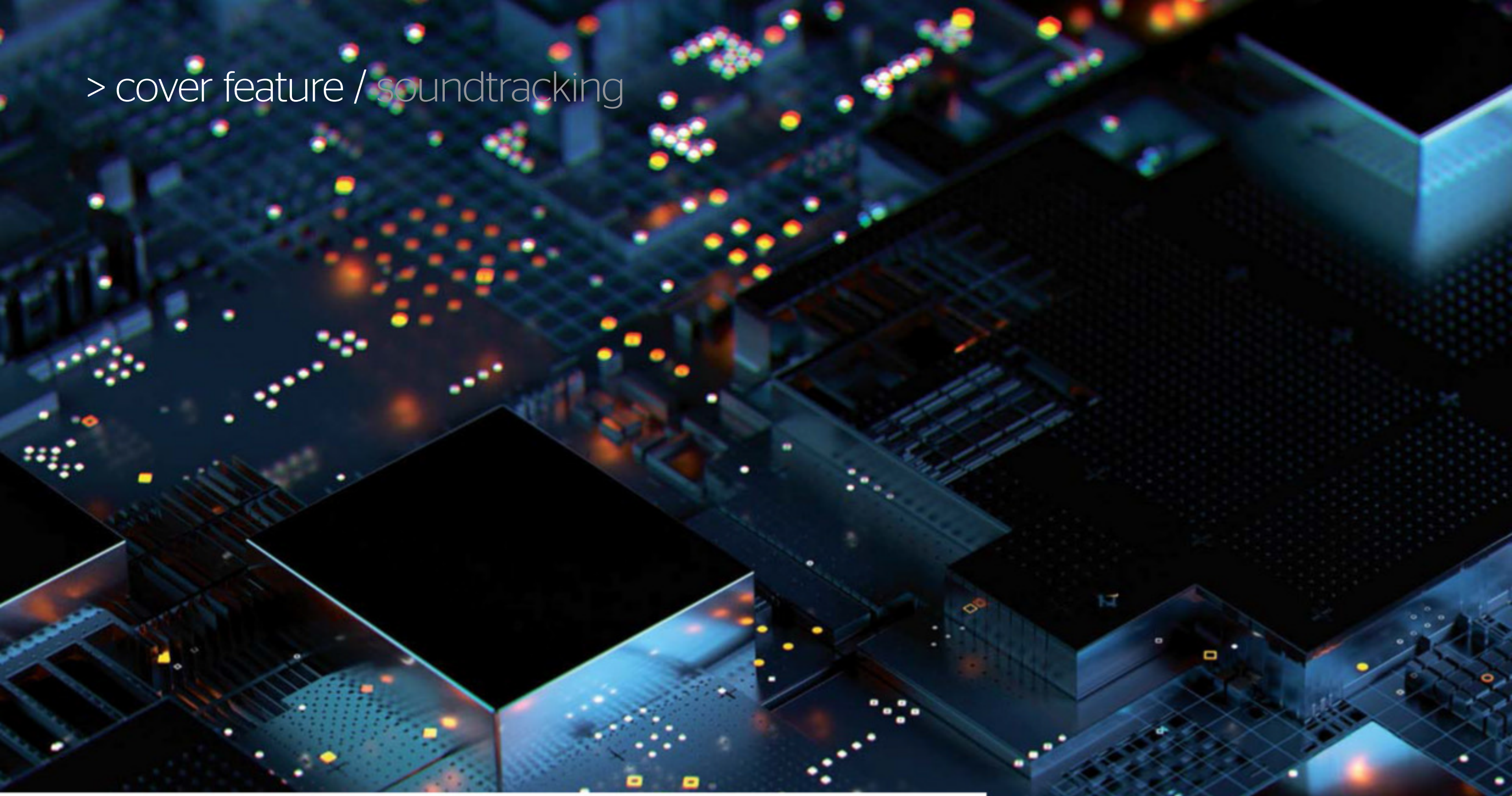
Extreme Music is Sony Music's sub-company which forges connections between production music and TV/film



Most sync and production music libraries will have a tagging system for easy navigation, worth remembering!



On the premium side of things, MusicBed offer up a more bespoke clearance service



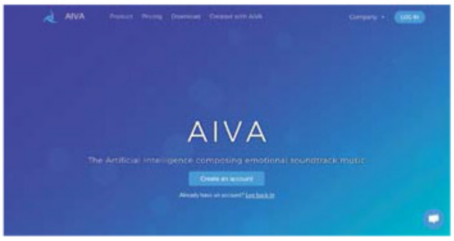
The future of soundtracking

With a constant stream of visual content competing for our eyes and ears, we wonder what the future will look like for soundtrack composers. And wonder whether AI is friend or foe?

Every day, the decisions that shape the future are being made. From the most groundbreaking innovations to the most basic, time-saving ideas. It's a truth that is extremely apparent in the music production world, where multiple new impossible-achieving products are released on a seemingly weekly basis. But it's true also of the world that soundtrack composers inhabit, with new tech increasingly replacing a traditional human role. The threat of a machine-based workforce is something that we might have once smugly thought was something that concerned other industries, but we – the creatives – would never have to worry about. Yet, with recent rapid developments in AI, services like AIVA, Amber and Ecrett Music are able to generate immaculate-sounding, royalty free music, crafted on the spot by super intelligent algorithms, trained to replicate some of the world's finest composers.

Initially dismissed as merely pumping out approximations of what your average composer might quickly rustle together, accusations of AI-crafted cues sounding bland and generic are holding less water. As we discovered when we explored the topic in last year's AI deep dive, these types of platforms are gaining a massive amount of traction with those who need to create the illusion of big-budget, glossy soundtracks when actually working to a very tight (or no) budget.

For DIY content creators, such as YouTubers, podcasters, or advertisers, having this arsenal of tracks on-tap is undeniably a positive, and an understandable investment (most require a monthly fee). Algorithmic compositional strength is increasing with each track they deliver, and have undoubtedly replaced a role once filled by a human composer.



AI platforms like AIVA are remarkable in how they build sublime scores on-the-fly, but are they a threat?

While these kinds of technological woes might keep some awake at night, for companies like DAACI, a London-based AI company founded by musicians, AI isn't the job-killing threat it's often painted as. DAACI's goal is to create a system that can generate creative options based on an input. They say that their major objective is to simplify the option-generating process that composers typically use anyway.

"It is very much working in tandem with the composer," the company's CEO Rachel Lyske told *Audio Media International* last year. "DAACI isn't a replacement for a composer, it's an enhancement of their process. They might choose it to replace their process but it's certainly not replacing the composer. In reality, most commercial composers already have heaps of options to play with, and we're just providing a similar [mechanism] for everyone

> “Just when it seems like things are stuck, there are always new voices.” Jonah Sirota

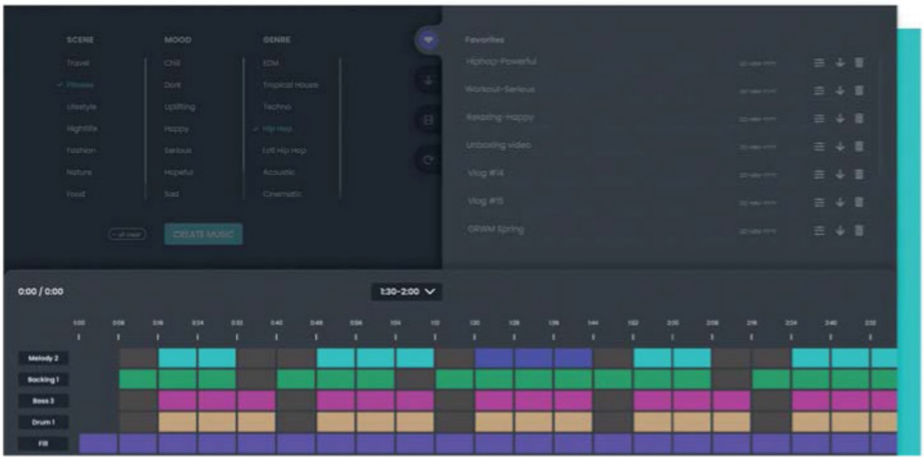
else. We respect that composers do that, and we’re enhancing that approach.”

There’s also the increasing prominence of video game soundtracking (which would require its own focused feature to cover entirely!). While this medium is still working its way into mainstream acceptance, and becoming more central to the majority of people’s lives, the popularisation of the much-promised ‘Metaverse’ or fully-immersive VR content will undoubtedly require soundtrack composers to be much more focused on space, position and 360 degree considerations, way beyond the music itself.

Beyond the technological, there have been some noticeable creative trends of late. Perhaps as a response to repositories of more library and AI-driven content, the notion of the soundtrack composer as a singular artist is undergoing something of a renaissance right now. Oliver Patrice Weder says he’s particularly enamoured by the more experimental direction that many soundtracks have taken. “It’s beautiful how new talent emerges and naturally they bring new sounds and approaches to the table,” Oliver tells us. “There’s a lot of experimentation going on, Cristobal Tapia De Veer with *White Lotus* or Hildur Guðnadóttir with *Chernobyl* or *Women Talking* more recently. I observe more song-like soundtracks and sounds that aren’t typically attributed to a film score (namely, no traditional orchestra) as well as a lot of sound design within the scores. That’s not to say that the traditional scores are vanishing, there’s still plenty of it and there will always be a need for that kind of approach too.”

Oliver’s appreciation of these singular voices is echoed by composer Jonah Sirota, who, as well as sharing Oliver’s appreciation of Cristobal Tapia De Veer’s extraordinary *White Lotus* soundtrack, says his perception of a monolithic trend of recognisable tropes has been shook by the influx of fresh composers. “There had seemed to be a clear ‘direction’ that scoring was heading in for a few years there – a pretty universal set of style expectations coming from the world of film. More recently, that seems to have been disrupted by an explosion of streaming content and creatively daring games, often created on a budget by young and hungry creators,” Jonah explains, “It has blasted the doors wide open, stylistically, for what ‘soundtrack’ music can be. I love, for example, Dan Romer’s soundtrack for *Station Eleven* and Son Lux’s brilliant score to *Everything Everywhere All At Once*. Just when it seems like things are stuck, there are always new voices.”

DAACI aim to create an AI-based system that aids composers and provide them with a wide resource-set

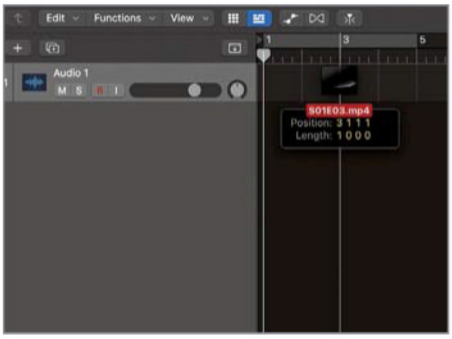


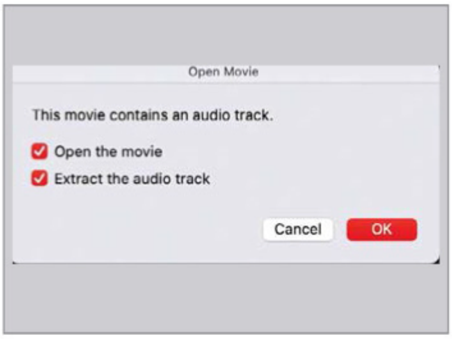
AI compositional tools are getting better at responding to inputs, and can carve their output for a range of needs

Oliver Patrice Weder is a champion of the experimental

> Step by step

1. Writing to picture in Logic

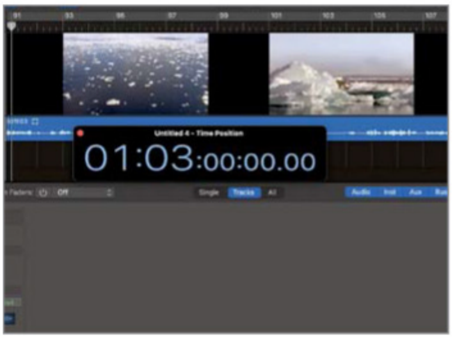


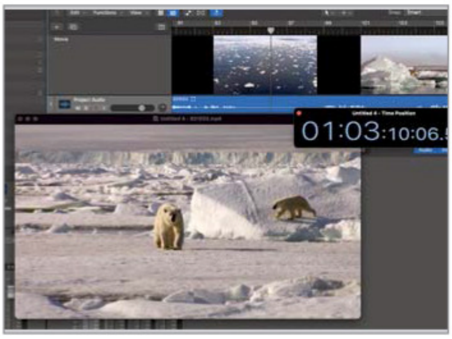


1 > Logic users may not be aware of the DAW's versatility when it comes to writing to picture. Import your video file by dragging and dropping it into your project, this will automatically create a new track.

2 > You'll be asked whether you want to import the audio into your project – If you're soundtracking a project with dialogue and V/O you'll definitely want to keep the source audio, if you're soundtracking purely to visuals or a temp track you might not.

3 > With the video (and its audio) in two separate, locked tracks, you need to make sure that the video's original frame-rate and audio sample rate aren't knocked out of sync by any of your existing Logic settings. Adjust to source if so.

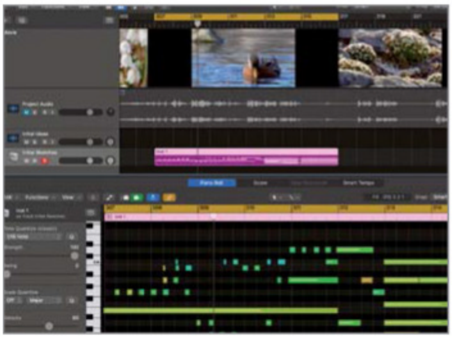


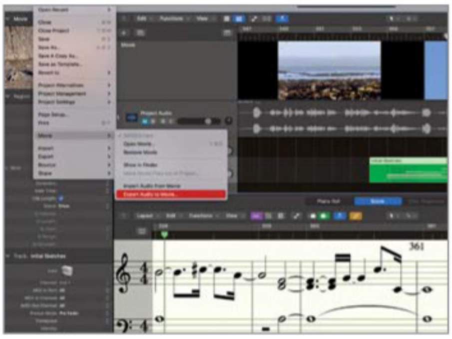


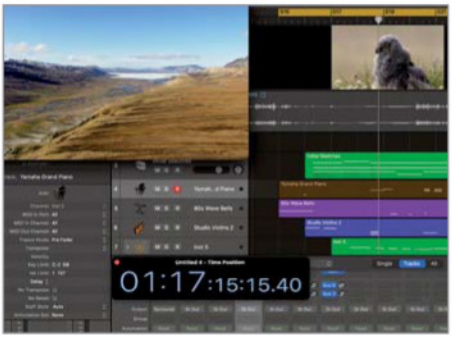
4 > It's also vital that you make sure the SMPTE timecode of your video file is aligned perfectly with Logic's Time Position, you can view this in larger form by clicking on the dropdown next to the transport controls and clicking Open Giant Time Display.

5 > While the video track contains thumbnails of key moments, you'll really want to pay attention to the left-hand corner, where you'll see the video playback. You can also render the video as a floating QuickTime window in a project.

6 > Rather than be overwhelmed by the whole project, it's best to work a section at a time. Highlight a key sequence, loop it, and begin to create rough ideas in response to the visual stimulus using your instruments.







7 > Your sketches should match the momentum and rhythm of how the director has edited the shots, while evoking the mood and setting of the overall piece. Working through the project, you can start to gradually fill-in various key themes and moments. Colour-coding is a useful practice here.

8 > While the project might take a while, periodically save out your revisions by going to File > Movie > Export Audio To Movie. This will Bounce your new video track with your new musical ideas as the audio. Ready to send on to the higher-ups for approval.

9 > While video editing itself is off the table, it's fine to remain in Logic to grow these initial sketches into larger, ready-to-go final arrangements. As you continue to refine your ideas, further instrumental flavours and textures can expand your own vision of the project's sonic universe.

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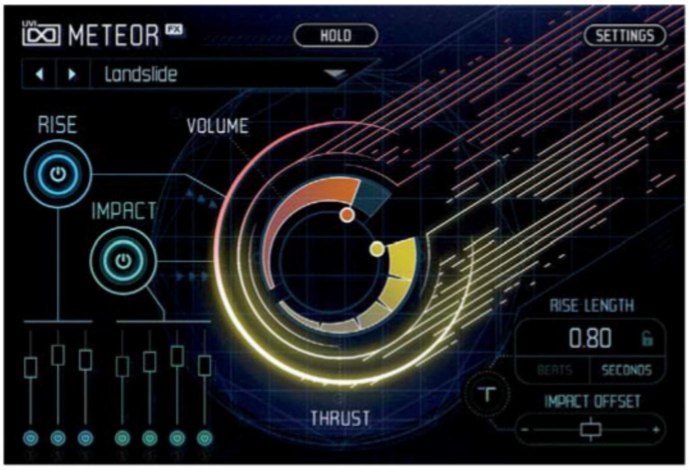
library.gorangrooves.com

GORANGROOVES

6 of the best sound design plugins

An integral facet of modern soundtracking, sound design is a practice well catered for by any of the following…



UVI **Meteor**

Mac/PC £132

UVI's swell and impact designer is a joyously dramatic tool that can inject much needed punch to your soundtracks and sound design cues. In addition to its banks of layered swells, crescendos and hits, Meteor sports a colourful effects section that allows greater modulation, it's also got a very intuitive UI that encourages experimentation and randomisation.

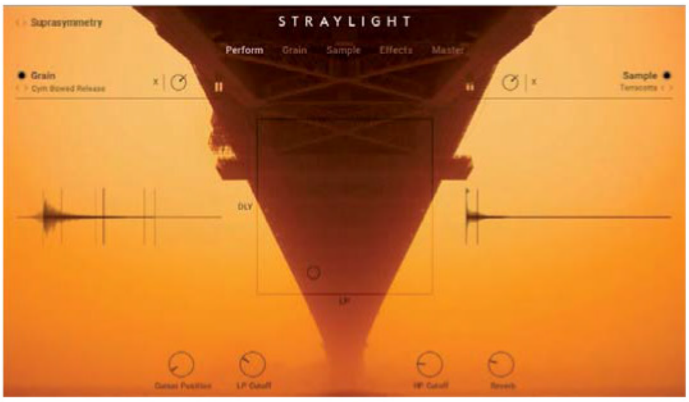
www.uvi.net

Native Instruments **Straylight**

Mac/PC £179

Native's granular synth is angled at those immersive, enveloping sound design mixes that have so defined modern epic cinema's best aural experiences. With a series of lush sound sources as its bedrock, Straylight enables you to build ambient atmospherics via its granular sample modules. Crafting unnerving, otherworldly textures has rarely been so much fun.

www.native-instruments.com

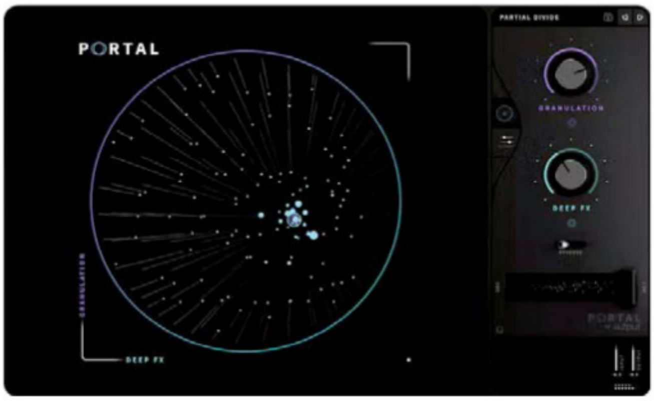


Output **Portal**

Mac/PC £131

Presenting the means to re-configure the way you make music into a granular world of swimming, interlocked textures, Portal can shake up your starting point so as to unrecognisable, pushing you down all manner of fascinating sonic highways. Its simple X/Y pad belies its deeper under-the-hood abilities to stretch, morph, quantise and pan your grains like putty.

www.output.com



Heavyocity **Gravity**

Mac/PC £399

Continuing in the epic vein, Heavyocity's spacious Gravity is a suite of vibrant hits, pads, risers and cinematic stings, melding the orchestral, electronic and sound design worlds as many modern soundtracks tend to. Its motion step sequencer is a dab hand at creating tempo-synced arpeggios and throbs, while its disturbing array of FX sequences range from the subtle to the downright terrifying.

www.heavyocity.com

Zero G **Ethera Gold 2.5**

Mac/PC £115

Another hardy film-scoring workbench that melds strings, impacts, effects and hybrid instruments, Ethera Gold also includes a range of emotion-affecting vocals in both male and female flavours. Its wavetable Core Synth textures incorporate samples of instruments such as brass, horns and string textures, while its multi-layered Vocal Synth is a true thing of wonder.

www.zero-g.co.uk

Spectrasonics **Omnisphere 2**

Mac/PC £410

A well-established staple of the soundtracking world, Omnisphere's reputation is built on its incredible depth, featuring top-notch banks of presets and artistically crafted patches as starting point, its 500 DSP wavetables, state variable filters and quad-layered pads provide plenty of scope for evolving wildernesses of sound. A real beast.

www.spectrasonics.net

6 of the best writing to picture DAWs

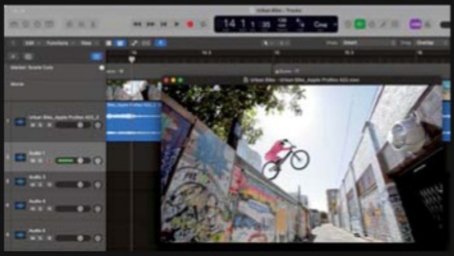
Not all DAWs can handle the processing required to run video, but these are all more than capable...

Steinberg **Cubase**

Mac/PC From £85

Steinberg not only spearheaded the DAW concept, they're also the top of the tree when it comes to the hierarchy of music-to-picture workstations. Cubase 12 has incredibly versatile video options, allowing you to sync rigidly to the video's timecode, automate your tempo changes and even apply basic video edits yourself. It all boils down to one of the most well-featured music and video workflows that money can buy.

www.steinberg.net

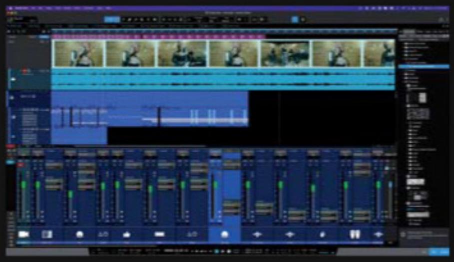


Apple **Logic Pro X**

Mac £174.99

As with many long-established features, Logic's video integration is now so quick and effortless that if Apple's flagship is your home production go-to, then you don't really need to look anywhere else to get started. With easy-to-use video importing, syncing and editing tools, it's astoundingly simple to build your soundtrack via your AU instruments or in-built Logic sounds.

www.apple.com



PreSonus **Studio One 6**

Mac/PC From £82

The latest version of Studio One not only incorporates an intuitive writing-to-picture workflow, but also includes tools to edit and re-shape the video itself. Aside from granting the ability to cut and trim to taste, Studio One 6's video player welcomes any and every format, and facilitates a reliably stable writing-to-picture experience.

www.presonus.com

Vegas **Pro**

Mac/PC From £7 per month

If you want to have a more visually angled approach, and want to shape existing cues, then Vegas Pro is excellent. Its versatile audio options allow for broader sound design and soundtrack melding, with the ability to deeply mould EQ, apply more detailed effects and optimise the final multi-channel environment.

www.vegascreativesoftware.com

MOTU **Digital Performer**

Mac/PC £410

A rock-solid choice for music-to-picture duties, Digital Performer integrates video without fuss, and allows users to keep their cues readily available via the DAW's 'chunks' feature. This makes copying cues to appear later in the project a breeze. It's also got the ability to add markers for pivotal moments.

www.motu.com

Ableton **Live**

Mac/PC From £69

Many wouldn't consider electronic music staple Ableton Live for writing-to-picture, but it's got better at handling video, and visually-stimulated creativity. While more forensic frame-based editing may need tempo-tweaking, Live is not one to easily dismiss.

www.ableton.com

6 of the best orchestral libraries

The power of an orchestra lay behind many of the best scores ever...

Audio Imperia **Jaeger**

Mac/PC £490

Aimed at those pulse-pounding Zimmer/Holkenborg-adjacent creatives, Jaeger's video game-recalling UI hints at the type of epic-scope that it expects you to be writing towards. It's easy to concoct speaker-decimating horns, booms and intense orchestral tension. Bridging the musicality of the orchestral world with the coloration of sci-fi flavoured effects, Jaeger is the aspiring blockbuster soundtrack-maker's dream.

www.audioimperia.com

EastWest **Hollywood Orchestra Opus**

Mac/PC £799

EastWest's Hollywood Orchestra Opus Edition is a one-stop shop for orchestral punch. Spanning the industry-leading sample library company's peerless roster of existing libraries, as well as a new violin section and redesigned interface, this immaculately crafted suite has little competition when it comes to attention-grabbing brilliance.

www.soundsonline.com

Spitfire Audio **Symphonic Strings**

Mac/PC £489

Spitfire's 'definitive string orchestra', Symphonic Strings is all about getting a blockbuster-ready sound. Sampling 60 players performing 175 articulations at AIR Studios, the London-based heavyweights have perfected home orchestration. Captured with some truly priceless valve and ribbon mics.

www.spitfireaudio.com

UVI **Orchestral Suite**

Mac/PC £130

With an intuitive interface, UVI's premiere cinematic solution is all about getting first-rate orchestral sounds with a minimum of faff. Spanning 60 high quality instruments, the key-switch system allows for speedy articulation adjustment, while its built-in convolution reverb allows you to situate your virtual orchestra within a range of famous spaces.

www.uvi.net

Orchestral Tools **Metropolis Ark Ø £130**

Long considered cinematic scoring's titans, Orchestral Tools latest addition to their renowned Metropolis Ark range boils down the wide-ranging scope of the multi-part series into one easy-to-control 'prototype orchestra'. Recorded at the Teldex Scoring Stage in Berlin, it's able to concoct cues for film, television and trailer projects with ease.

www.orchestraltools.com

Vienna Symphonic **Smart Orchestra**

Mac/PC £155

Bringing the immense power of a 140 piece orchestra to software, Vienna's Smart Orchestra also encourages quick sketching of your future emotion-tugging themes. It also cleverly knows how to auto-balance elements of the orchestra itself, while the ability to integrate more experimental FX can steer you into more out-of-this-world directions.

www.vsl.co.at

> Step by step

Fitting strings in the mix

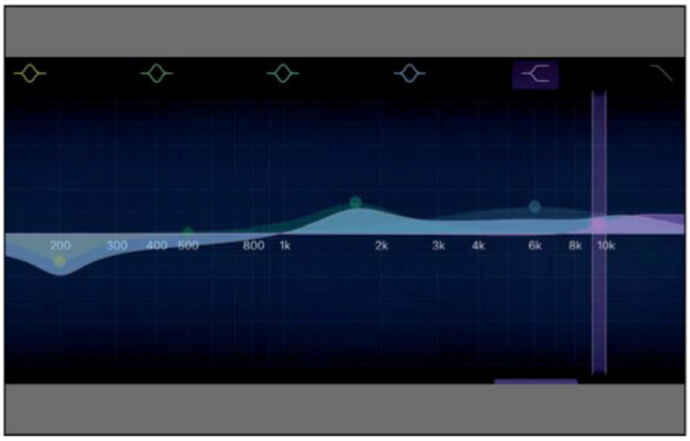
1 > Though many orchestral libraries present pre-mixed samples, to make these sampled strings work within the context of a wider mix, it's critical to consider their relationship to competing elements in their frequency space.

2 > While high register strings and low-end instruments need differing processes, it makes sense to eliminate anything below the 80 Hz range, boosting the upper-low frequencies between 100 to 150 Hz to give higher register strings some weight, and reducing the same frequency range with lower-pitched strings.

3 > If you're mixing a bowed instrument like a violin, you might want to increase the human-factor – the bow sound – which usually sits between 500 to 1kHz. Using high-pass filters can eliminate any low-end murk that might be present within high-register instruments.

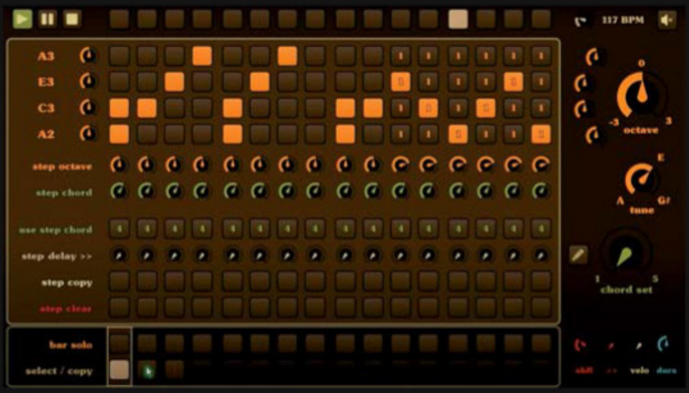
4 > Most top tier orchestral sample libraries are recorded in world-class scoring stages, but if you want to conjure a wider scope, then place it within a long-decaying virtual hall or auditorium-type space. Be sure to not let the tail last too long (five seconds is usually enough) or things can get a bit murky.

5 > You want to keep your attack clear, yet maintain the lingering, enveloping sound of the room to enhance the emotion of the strings. Ramping up the Predelay can help to emphasise the moment when the strings begin, prior to the reverb itself starting up.



6 > A basic rule of thumb when applying equalisation to strings is to make sure you don't go overboard and make them too artificial sounding, use wide Q factors for the more general boosts and narrower Qs for the more forensic cuts.

The CM Plugin Suite's soundtracking toolkit



01 >

In the CM Plugin Suite, you'll find a range of hugely useful additions to your score-idea forming arsenal, first up, there's MonoPlugs B-Step CM, a step sequencer for beats and chords that can be put to use as a sketchpad on a range of musical and rhythmic ideas to underpin your cues.

02 >

When it comes to creative delay, there's a whole host in the Plugin Suite to try. Baby Audio's Baby Comeback allows users to select delays between 0.01 and 2500ms, and is great for building atmospheres.

04 >

Within our repository of synths, the effects-packed wonder of Seaweed Audio Fathom CM provides the ability to carve a variety of lush wavetable, additive FM and VA sounds. Its modular architecture leads to millions of possibilities.

03 >

Getting into the gnarlier domain, Rob Papen's Distort CM is a fantastic way to crunch, distort and widen those Foley elements or DIY samples that you incorporate into your sound design stew. It's also got some versatile modulation controls.

05 >

Perfect for making the kind of high-octane, modern industrial-tinged drum sounds, Thenatan Trax CM sports 20 sublime presets and its deep tone-shaping abilities are matched by its sound-mangling effects.

06 >

Trying to make our dry sounds work in a widescreen soundstage can be tricky. That's where an application of Audio Vitamins Life CM can make all the difference, able to widen, sweeten and prepare audio for mixing, it's a must-grab!

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Become a better producer now with pro advice, expert videos and audio examples from our gurus

Depeche Mode Masterclass
with *Andy Jones*

42 Depeche Mode sounds

With the synth-pop masters returning to the charts, what better time to learn how to get their sounds

Mixing Masterclass
with *Jon Musgrave*

46 Metering tools in mixing

Jon Musgrave talks about the importance of using your eyes when mixing, and understanding meters

Download the accompanying audio files for this feature at bit.ly/cm320downloads

L-R: Andy Fletcher (now sadly passed), Dave Gahan and Martin Gore

Vittorio Zunino Celotto/Getty Images

Create classic Depeche Mode sounds

This month, to celebrate the new Depeche Mode album, *Memento Mori*, we take a look back at some of the band's classic sounds and sequences: from *See You* to, yes, *The Last Of Us*!

> With Depeche Mode's 15th studio album, *Memento Mori*, out now, we've decided to look back at the band's synth history and have a go at recreating some Mode-like beats, riffs and sequences. We'll not only wrestle some sounds from our trusty Zebra CM free synth, which you can download right now, but also use an emulation of Depeche Mode's most widely used synth.

When the band first got together back in 1980, they used cheap analogue synths of the time, including a Kawai 100F, Yamaha CS5 and Moog Prodigy. However, the one synth that has been used more than any other, and across most Depeche albums, is the ARP 2600. This was Mute Records owner Daniel Miller's (and once owned by Elton John, synth fact fans). It was not only used for synth sounds and sequences from debut album *Speak & Spell* onwards, but also for creating drum sounds, specifically the kick.

In this tutorial we'll also look at how you can use an ARP emulation like the ARP 2600 V from Arturia to create some classic Mode sounds and sequences, including that kick drum sound.

It's important to note that technology was limited in the '80s, so forget most of the functionality in your DAW as we're also going to emulate the sequencing back then – an ARP 1601 capable of delivering just 16 steps. So let's go back in time and engage 'classic Mode'.

Peter Noble/Redferns

Depeche Mode

Formed in 1980, Depeche Mode have since become one of the biggest bands in the world. Now just a duo of Martin Gore and Dave Gahan, after founding member Andy Fletcher passed away last year, the Mode have become synonymous with their use of synths and sampling over the last four decades. Gore now owns one of the biggest hardware synth collections, and we'd bet he rarely uses softsynths…

> Step by step

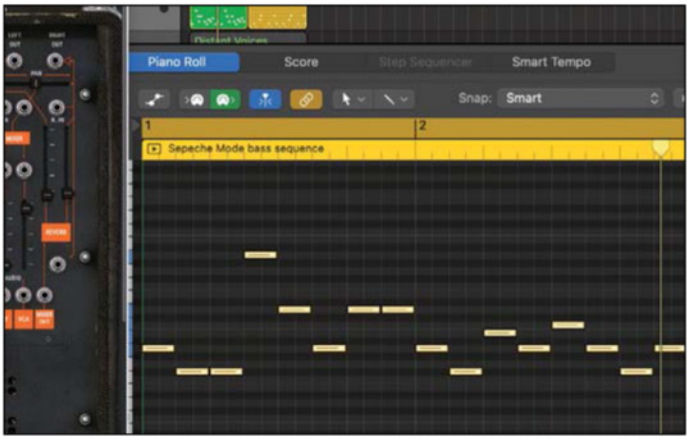
1. Mode basslines in Zebra CM

1 > We'll start our bass sequences using our very own Zebra CM synth, which is easily capable of delivering bass sounds from the early '80s; if anything you'll need to dial back on its sound to make it simpler. First load in a patch called Pluck Lead, a nicely rounded sound, ideal for a bass sequence when played low.

2 > We're going for a bass sequence vibe from second Mode album, *A Broken Frame*, when those simple analogue synths were still being used, so we'll dial back on the complex waveforms. Pull Oscillator 1 (drag and click down) back to Waveform 1 and Oscillator 2 to Waveform 1 or 3.00. The sound is now even rounder and more mellow.

3 > To more subtly mimic the early '80s analogue vibe, tweak the filters of both oscillators – Osc1 in particular. Here we've edged the filter on this oscillator down marginally to a value of -22.00 and the sound is becoming even more Mode-like.

4 > Now to emulate that 16-step ARP 1601 sequencer. You'll likely have different ways to do this in your DAW. If you have a step sequencer, then load it up, set your tempo to 130 and draw in a sequence of notes – use just 16 cycling around. Here we are using two blocks of eight in the Logic Step Sequencer. **Audio: 1. DM-a-like sequence.wav**



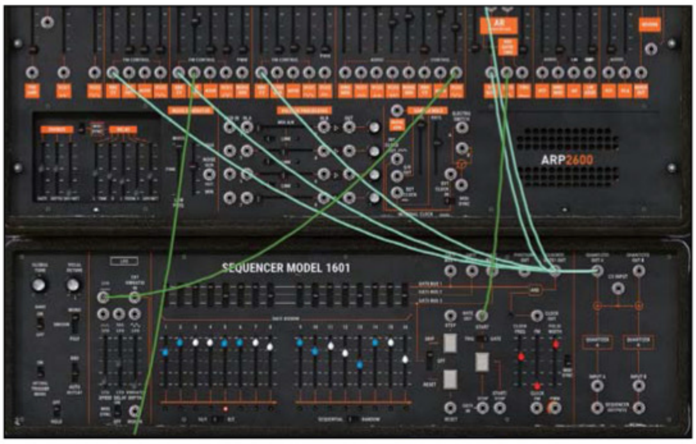
5 > If you don't have a step sequencer to hand, it's easy just to draw in the notes using a piano editor. Here we've drawn in a similar set of notes to the opening riff on early Mode track *See You*. **Audio: 2.See You-like sequence.wav**

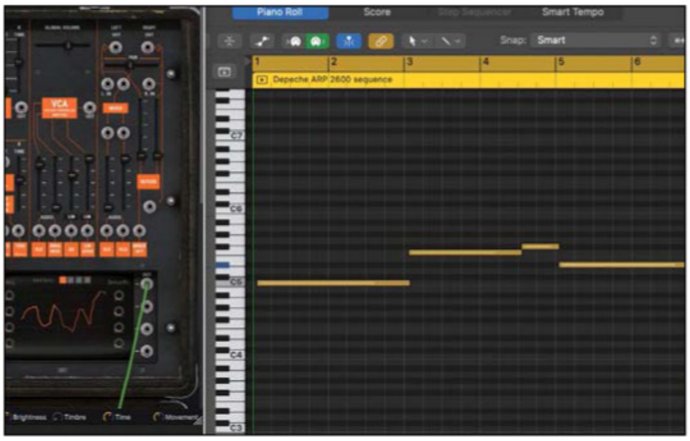
6 > We've doubled the number of steps to 16/bar and pulled the tempo back to 100. This time we're triggering the preset 'SM a bass MW' and tweaking the filter for Osc2 to get the bassline from the Aggro Mix of never *Never Let Me Down Again* (the original of which features in *The Last Of Us*). **Audio: 3. DM Aggro Bass.wav**

Download the accompanying audio files for this feature at bit.ly/cm320downloads

> Step by step

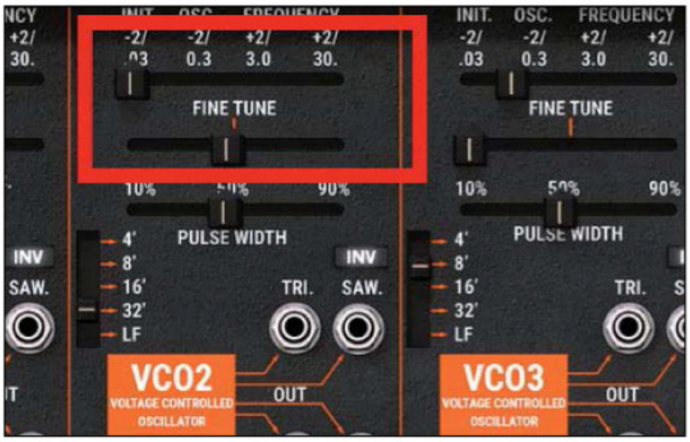
2. Why the ARP 2600 is the most widely used Depeche Mode synth





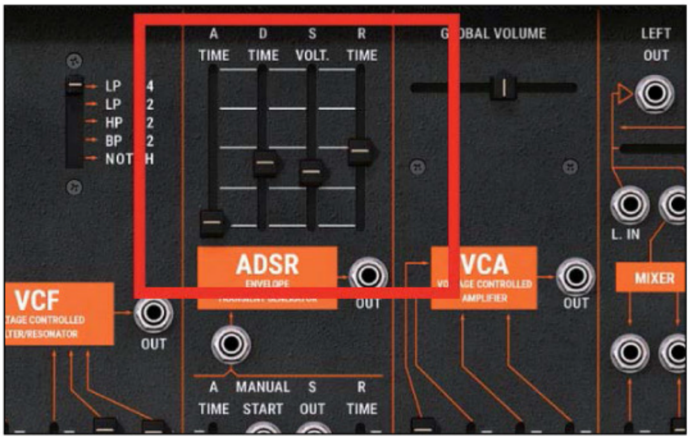
1 > If you're lucky enough to own an emulation of the ARP 2600 in software, your Depeche dreams can come true even quicker. There are some great ones out there from Arturia and Cherry Audio. We've opted for the former with the ARP 2600 V, a great emulation, not least because it comes with a 1601 built-in and loads of sequencer presets.

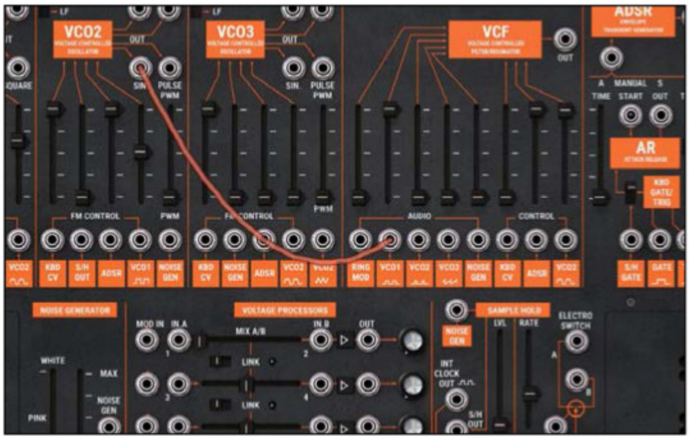
2 > We'll use one of these now. Go for a major to minor key change (for the sad/dark Depeche-like progressions) and simply draw in a note sequence, triggering a sequencer preset like 'Iwik', which not only gives you notes but a percussive element, more evident on later Depeche tracks. **Audio: 4. ARP 2600 rhythmic sequence.wav**



3 > Now copy the part you've just created to a new track and pair it with a bassier sound like the Sequence Gated preset. The bass and lead complement one another and veer a little towards Jean Michel Jarre – but then he (probably) used the same type of sequencer! **Audio: 5. ARP 2600 sequence with bass.wav**

4 > Load up the X Drum Sequence preset and you'll hear a more rhythmic side of the ARP, something Depeche explored a lot with their albums. Now we'll take that further and use the ARP to create a kick drum sound. Start by selecting an oscillator and tune it low as shown. We need the frequency low to hear the kick's power.





5 > The shape of the kick drum sound is very important – you want a short Attack value for kick impact and the Decay value (here around 48ms) can very much determine the pitch of the kick, as can the Sustain (here it's set to 0.37).

6 > Route the oscillator to the filter which gives you more control over the shape and tone of the kick drum (particularly with the Resonance control) so you can shape your kick drum to perfection. **Audio: 6. ARP kicks.wav**

PRO TIP

LESS IS MORE

One thing we've learned after spending years making music is that one rule to often follow is 'less is more'. Use less volume, fewer effects, fewer tracks and less clutter and your tracks will usually benefit. With early Depeche Mode tracks 'more' wasn't really an option because of the limited technology of the time, so they were limited to 16 steps in a sequence, fewer tracks to record to tape with and, of course, a limited sound palette. This didn't hold them back though, and some of the most memorable songs in synth pop were recorded within these limitations – and are all the better for it. So to emulate classic recordings, you'll have to simulate these limitations. That means keeping track counts to eight or 16, using effects sparingly and making sure that the sounds you do employ stand tall and work well with one another. We all know that the tyranny of choice and plugin bloat for computer musicians can become real issues, so sometimes it pays to just pretend like it's still 1981, embrace our restrictions and concentrate on writing fabulous songs instead...

Martin Gore performs in Belgium in 1985 on a DX7

Gie Knaeps/Getty Images

In concert in New York at the Barclays Center in 2018

Taylor Hill/Getty Images

RECOMMENDED LISTENING

DEPECHE MODE
SEE YOU
Yes, we have borrowed a little from this classic early Mode track here, but it demonstrates not only the power of a 16-step sequence, but some great custom percussion sounds too.
bit.ly/dm_cu

DEPECHE MODE
NEVER LET ME DOWN AGAIN (AGGRO MIX)
The original has now found fame as it was used brilliantly in the series *The Last Of Us*. This is the Aggro Mix that makes great use of the 16-step techno sequence, recreated.
bit.ly/dm_never

Download the accompanying video and the MIDI/audio files at **bit.ly/cm320downloads**

Metering tools

Mixing might be mostly about using our ears, but there are other senses we can bring in too, specifically our eyes

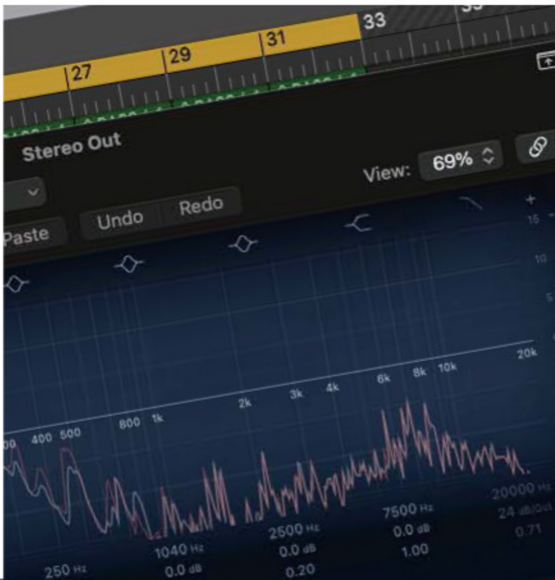
Jon Musgrave

Jon is a London-based producer, mixer, composer and club remixer with a diverse CV that spans dance, pop, rock and music for media. He's also a long term contributor to *Computer Music*. Whether working alone or collaborating he usually handles final mixdowns, which is why we've got him to share some pearls of mixing wisdom.

> DAWs are full of great features to help view and analyse our tracks and this month we're going to look at how to use some of these during the mix process.

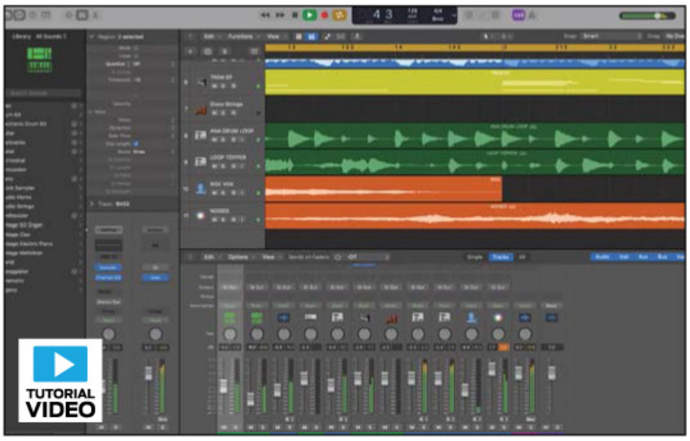
Working in audio, and mixing in particular is mostly about using your ears and training yourself to hear things in a number of different ways. This combination of critical listening and more general objectivity can take some time to master. Nevertheless, there are times when we can and should be using our eyes as well. The most obvious example is level meters. But beyond making sure we don't overload the channel, what information do these convey? And what about spectrum analysers, correlation meters and everyone's current favourite, the loudness or LUFS meter?

In this masterclass I'm going to focus on the metering and visual tools you can use when mixing, looking at the specific options available, what information they provide and how we can use them to assist our ears. Most DAWs already include a decent set of analysis tools, but if you have the budget there are some awesome third-party options. That said, if you need a freebie, don't overlook the CM Plugin Suite, which includes at least a couple of pretty decent spectrum analysers.



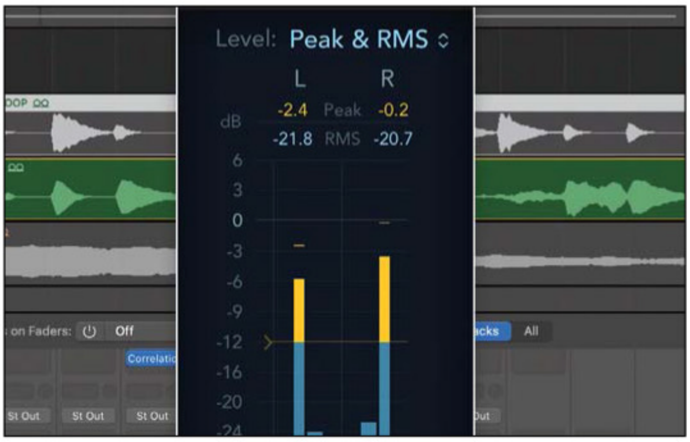
> Step by step

1. Metering tools

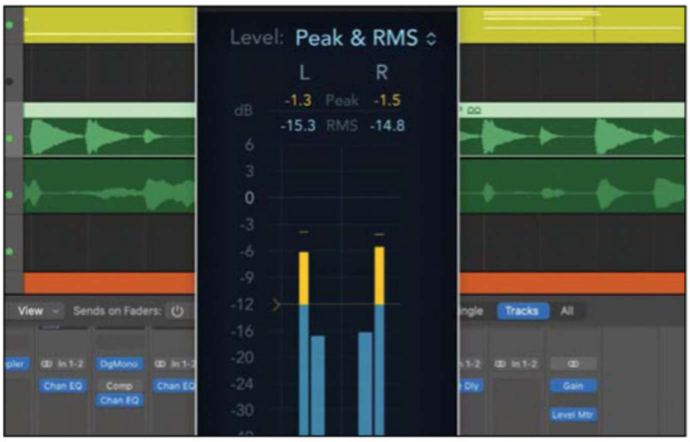


1 > Let's start with levels. The main meters you should be looking at are the peak-style meters next to your faders. I'm not going to get into the topic of gain-staging here as this will be covered in a future masterclass. Still, although avoiding overloads is not always necessary in a 32-bit floating system, it is a wise move.

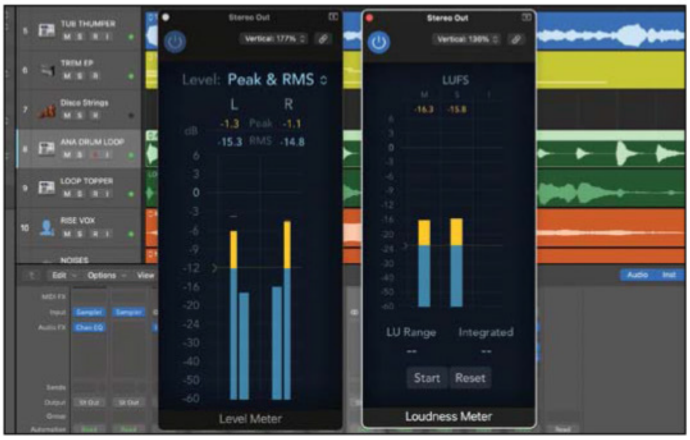
2 > The options for fader-side metering vary across DAWs, but usually include basic peak level metering, so you should have that covered. If you want more detailed level metering such as RMS, VU or LUFS (which I look at in steps 5 and 6), you may have to load a separate plugin or even purchase a third party plugin.



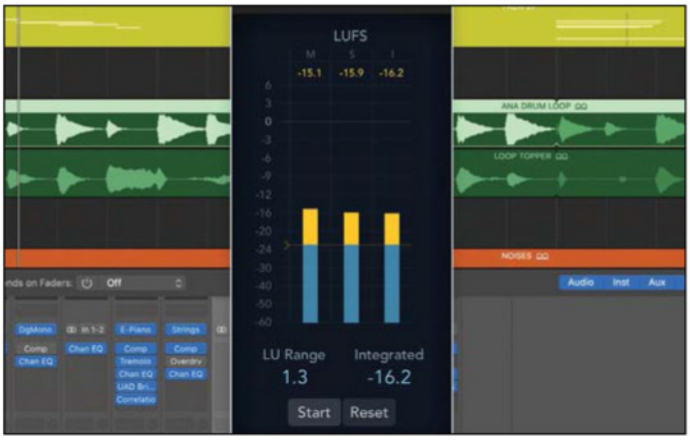
3 > The reason you might want various level indicators is because they show loudness in different ways and achieving perceived loudness is a key aspect of mixing. For example, it's easy to have high peaks but for the mix to sound quiet. RMS (root mean squared) meters can help you judge this as they better indicate perceived loudness.



4 > Here we've loaded up a combined peak and RMS meter on the main mix output. The RMS level will be lower than the peak level, as it is here. What's of interest to us is by how much it's lower and also how much variation there is. Here you can see the RMS value is about -15dB and peak about -1.5dB.



5 > Although our RMS meter is helpful, it's a real-time meter based on average power. To get an even more accurate sense of how loud a track or our mix is, we can use what's called an average or 'integrated' reading on a LUFS (loudness units to full scale) meter, where the scale is based on perceived loudness.



6 > LUFS meters include momentary, short term and integrated level readings as well as some level ranges, all of which can be handy. When mixing, the integrated reading can really help. Here you can see the meter has a Start option at the bottom, allowing us to collect an average level for various parts of the track.

> Step by step

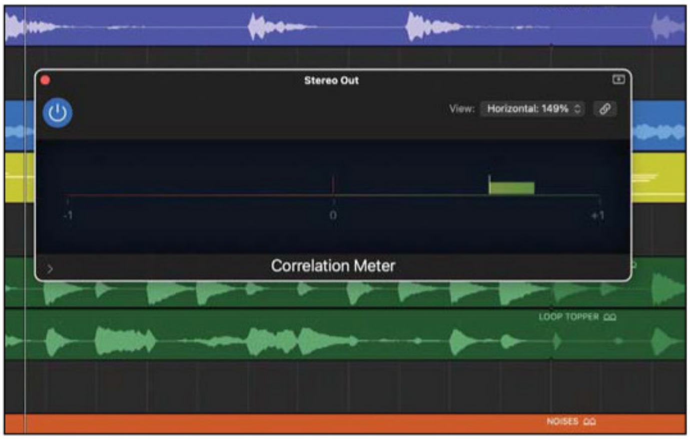
1. Metering tools *(continued)*

7 > Next up, spectrum analysers. These provide a real-time plot of amplitude against frequency and are often incorporated into EQs. They are usually line curves, sometimes have adjustable precision and may also have a zoom option. Other formats include multiband graphs, which you can also see in the grab.

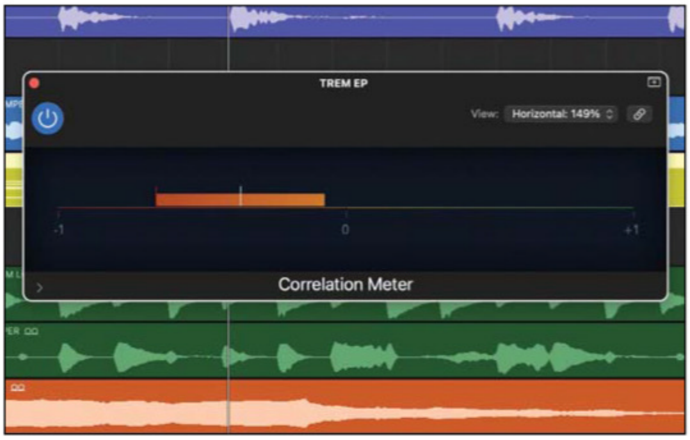
8 > For audible frequencies, the spectrum analyser is a great second line tool. If for example you can hear a prominent and maybe undesirable tone in a sound, a quick look at the analyser can help reveal where the tone is. Here we can hear and see a dominant frequency at about 350Hz, and can then choose a plan of action.

9 > Spectrum analysers can also be ideal for handling frequencies that are harder to hear. This can be great for keeping an eye on low and sub-bass behaviour but also very high frequencies too. Here we have a keyboard sound with an unusual high frequency peak and the analyser helps us see its frequency region.

10 > Next up, looking at this bass sound on the analyser shows there are a lot of low and sub frequencies in the sound. Typically we would handle this using a high-pass filter. Here, using our EQ analyser in post-EQ mode, we can also see the outcome and adjust the filter cutoff and slope to taste.



11 > Finally, correlation meters. These show the phase relationship between left/right stereo channels. A mono mix shows as fully positive (+1 on our example). A fully negative reading occurs if left and right are identical but one is phase inverted. Typically, a mix will meter as positive. However, we may have elements that meter negative.



12 > Some mix elements may have artificial width enhancement that causes this. If when we listen in mono, elements disappear or decrease substantially in level it can be handy to use the correlation meter on those elements to assess by how much the channels are out of phase and how this changes over time, then we can solve it.

PRO TIPS

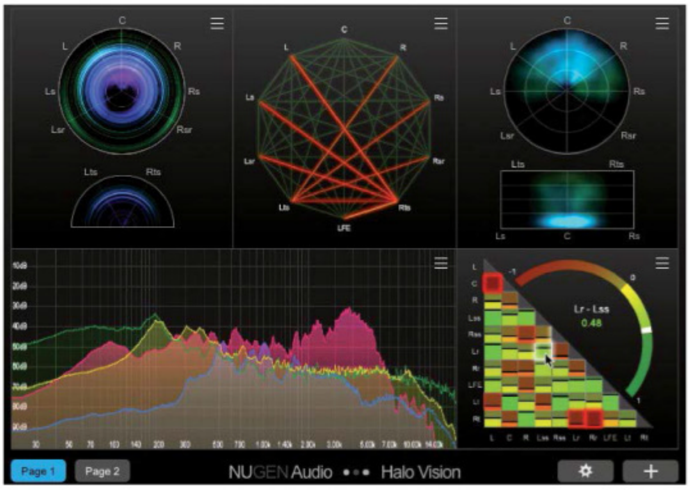
GONIOMETER

The Lissajous display or audio goniometer is a highly intuitive display that can help you interpret phase, level and to some degree frequency content. Left and right channel levels are plotted such that a hard-panned signal appears as a 45 degree straight line either side of the vertical line. This means a totally mono single on a stereo output will produce a vertical line. Level differences between channels and overall levels dictate the width and overall size of the plot. A full frequency stereo mix results in a fast dynamic display that looks like a ball of string.

Logic X Goniometer

SURROUND METERING

Should you find yourself mixing for multi speaker formats such as Dolby Atmos, the number of channels create new demands for your meters. To put this into some kind of context, each of your outputs will have some kind of correlation relationship with each other. Statistically speaking, that's quite an uplift on stereo where you're only concerned about the correlation between two channels. In practical terms, you're unlikely to experience strong correlation issues across multiple pairs. However, keeping track of things is still important, and making use of surround-equipped metering such as Nugen's Halo Vision could be a wise move.



Nugen's Halo Vision

Sam Smith's performance at the Brits called for a hard-hitting, all-encompassing mix

Gareth Cattermole/Getty

RECOMMENDED LISTENING

SAM SMITH & KIM PETRAS
UNHOLY
If you're aiming for a wide and impactful contemporary mix like this, your metering tools can really help.
bit.ly/sskp_unholy

METALLICA
THE DAY THAT NEVER COMES
Use metering to help improve your mix loudness, then it won't need to be slammed in mastering as heard in this example.
bit.ly/met_tdtnc

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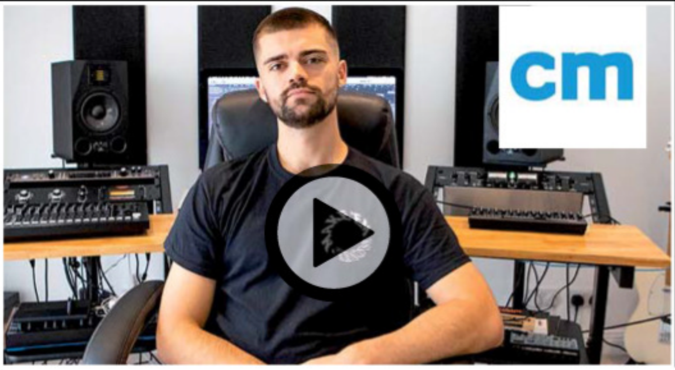

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The latest computer music gear tested and rated!

52__FABFILTER TWIN 3
A whopping 13 years after its last iteration, version 3 of the highly favoured softsynth is out now. We give it our verdict...

Our promise

We bring you honest, unbiased appraisals of the latest computer music products. Our experts apply the same stringent testing methods to all gear, no matter how much hype or expectation surrounds it.

What the ratings mean

1-4__A seriously flawed product that should be avoided

5___This product's problems outweigh its merits

6___A decent product that's only held back by a few flaws

7___Solid. Well worth considering

8___Very good. A well-conceived and executed product

9___Excellent. First-rate and among the best you can buy

10__Exceptional. It just doesn't get any better than this!

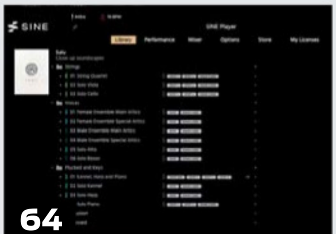
54 Arturia MiniFreak V

56 Spitfire Audio Albion Colossus

58 Tracktion/Dawesome Kult

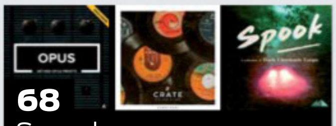
60 Modartt Pianoteq 8

62 Audient id24



64 Orchestral Tools Salu

66 Fluid Audio Image 2



68 Soundware

72 Reverb Roundup

Computer Music Innovation Award – Awarded to products that challenge existing ideas and do something entirely new

Computer Music Performance Award – A product has to really impress us with its functionality and features to win this one

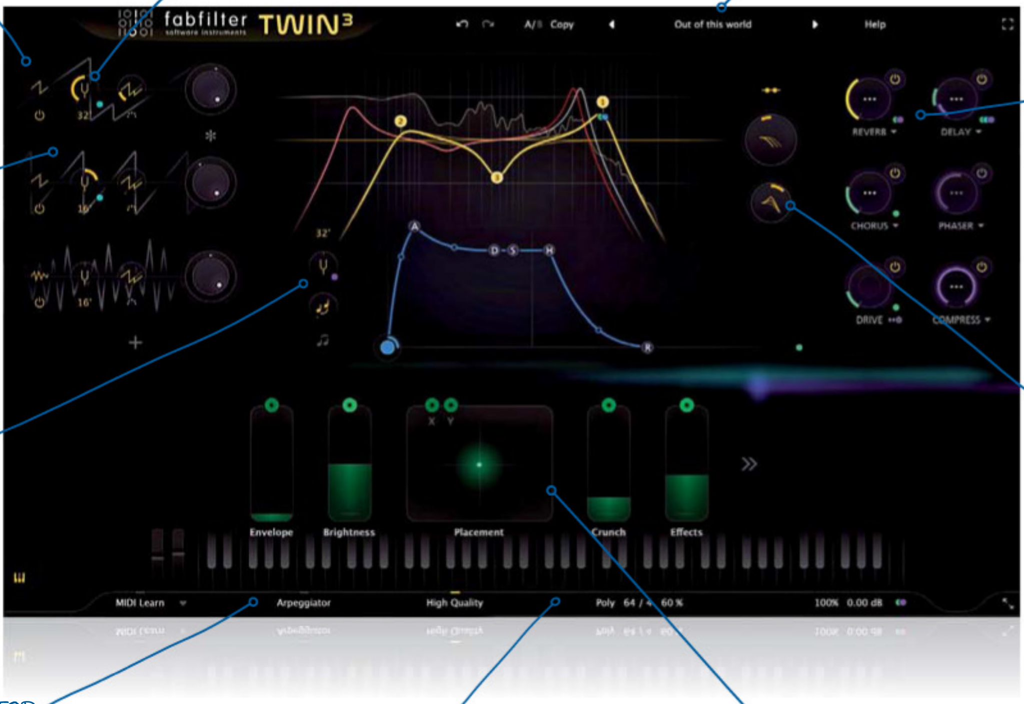
Computer Music Value Award – If the product exceeds expectations for its price, it will receive this gong

Computer Music Editor's Choice Award – In the opinion of the Editor, the best product reviewed in the magazine this month

ALL NEW CORE INGREDIENTS
New oscillators and filters in easy to use drop-down menus

LOTS OF TUNING
The oscillators can have 'analogue drift' or dramatic tuning changes via the core octave

PRESET SECTION
You can tag or search sounds here or select by category



NUMBER OF OSCILLATORS
Up to four 'vintage sounding' oscillators and up to eight waveforms each

EFFECTS
It's very easy to select dramatic effects and adjust levels here

FILTERS
Add up to four filters which are, as you'd expect, fab

EXTRA FILTER CONTROLS
Allow dramatic tweaking of all the filters simultaneously

ARPEGGIATOR
Not as in-depth as some synths but simple to control

POLYPHONY AND UNISON
Fatten sounds or increase the number of voices (up to 64) that you can play

MODULATION EXTRAS
Access parameters more easily and use drag and drop to assign

FabFilter Twin 3 €129 PC MAC

Twin is one of the few softsynths to have reached 'legendary' status. After 14 years, it now reaches version 3, but was it worth the wait?

> Alongside Serum and Massive, Twin is one of the most common 'favourite' synths of the producers we talk to in *Computer Music*. Our first experience of it goes right back to its launch in 2005 – can it really be? – when we were instantly struck by its huge, often dance-friendly presets, easy workflow and high quality sound. All things that its makers Fabfilter have since become famous for. Twin 2 arrived in 2009 with extras aplenty, and now we have a completely refreshed version 3 (available as VST, VST3, AU, AAX and AudioSuite), a mere 14 years later.

All new… but familiar

Twin 3 has had a complete overhaul. There's a totally redesigned GUI, improved workflow, more oscillators and filters, an all-new drag and drop modulation system, plus an added effects section. However, put it side-by-side with Twin 2, as we did (we still use the previous version) and you will recognise it as being of the Twin clan.

As with Twin 2, oscillators are on the left, filters in the middle, modulation along the bottom and effects on the right. But everything about v3 screams 'more, and more'. The effects get their own section, you can have up to four oscillators and filters, and the modulation and sound design options – see the separate box to the right – seem endless.

The colourful design is very appealing and does update the previous version to Fabfilter's latest styling; it adheres to the look and feel of their family and is very 2023. However, we found some sections, like the modulation area, to be a little clearer on the previous incarnation.

Otherwise, not only does Twin 3 borrow the design aesthetic from other Fabfilter plugins, it

> "It boasts huge sounds – but what synth doesn't these days? It's where you can take them that counts"

also delivers their component filters and effects, so these are of a very high quality. For each of the four filters, you can select three slope types, seven filter shapes and 11 characteristics. And the effects section is very well implemented, if not quite as fulsome as that you'll find on other synths (although much improved over v2). You get six slots and clicking on each opens up other parameters to tweak.

We also like the extra Filter Frequency Peak and Offset controls to the right of the filter section. These enable you to change these values for all four of the filters simultaneously and can really add some supercharged drama.

At launch, Fabfilter Twin stood proud as one of the few synths that delivered not just the analogue dance sounds of the era, but also other varied sonics. Version 3 certainly takes things up a few notches. It sounds every bit as good for dance sounds (and even includes a Best Of selection from Twin 2). The sounds are immense and as punchy as you like, but really this synth goes a lot further.

Which is just as well, because 14 years on, the dance/analogue thing is done by more softsynths than any other kind of synth out there, so there's a lot of competition. However, Twin 3 really – and we mean *really* – excels on the kind of hands-on, real-time manipulation that we love; the kind of tweaking that has you reaching for the save button over and over, so on that score, this is a real winner.

Everything about Twin 3 screams 'easy' but the modulation section is all that and more, with a fabulous drag 'n' drop format and loads of depth if you need it

Sound design and modulation

Twin 3 really is a sound design dream. Start on the left hand side and simply introduce different oscillator types, sync values and tuning options by way of (usually) drop-down menus. The filter section too lets you easily select from the options detailed in the main text, but the real fun happens in the modulation section. Here you can introduce sources like LFOs, envelopes, sliders or X-Y pads, or external MIDI sources (mod wheel, velocity, aftertouch etc). You can then use a fabulous drag and drop feature to link these sources to destinations. You could, for example, create an XY pad and use the X position to control the reverb. Once you click and drag on the X source, modulatable options are highlighted. If you then drag over the reverb, its Time and Brightness parameter options appear, so simply link to one to modulate it. It's a great system with pretty much unlimited options to create complex and evolving sounds, and you'll want to dive right in.

Fab-u-lous

Twin 3 boasts huge sounds, then… but what synth doesn't these days? It's where you can take them that counts, though, and in such an easy way that Twin becomes more of a sound design tool than preset plunderer. A cracking update, then, and if you need a synth that punches through your mixes and explores new textures, it's right here. Fab times three. **cm**

Web www.fabfilter.com

You can load in some of Twin 2's presets into Twin 3, so we did just that. Here are both playing the same sound

Alternatively

Synthmaster One
cm243 » 9/10 » $99
It can go in different directions compared to Twin, but also features a similar feel and sound

Lennnar Digital Sylenth1
cm113 » 10/10 » €9.95
A classic synth from the Twin 2 days, but still punches above its weight and well above that price

Verdict

For Big, *big* sound
And a huge potential to create more
Lovely modulation system
Great hands-on tweaking options

Against Some features were slightly clearer to see on v2

Twin 3 might have taken 14 years to appear, but it is a huge sounding synth, a solid sound design tool and a fantastic update

9/10

OSCILLATORS
Algorithmic oscillators provide a choice of many different synthesis method types

LFOS
MiniFreak V's LFOs offer varied waveforms as well as the ability to create custom patterns

FILTER
Detailed model of MiniFreak's analogue multi-mode filter, with low-pass, band-pass and high-pass

FX
Stereo effects section adds space and sparkle to otherwise monaural sounds

SEQUENCER
The built-in pattern sequencer can be triggered and transposed by playing notes

PERFORMANCE TOOLS
MiniFreak's performance tools, such as one-note chord mode, are carried over from the hardware

ENVELOPES
Conventional ADSR and unconventional Cycling envelopes for varied character

VOICING
MiniFreak V offers Monophonic, 6-voice polyphonic or 12-voice paraphonic voicing

MACROS
Each of MiniFreak V's Macro controllers can modulate up to four parameters

MATRIX
An intuitive modulation matrix makes light work of mapping modulation sources to synth parameters

Arturia **MiniFreak V** €199 PC MAC

Having emulated practically every significant synth ever made, Arturia turns its attention to one of its own creations

> The power of Arturia's Freak range of synths comes from the algorithmic oscillator that was developed for the series. These oscillators can load different synthesis engines – ie algorithms – allowing them to completely change their sound and character. Cleverly, Arturia has arranged things so that each algorithm has just three editable parameters, and these always have a certain similarity of function, no matter what the algorithm is.

Two of these oscillators sit at the heart of this new software iteration of the MiniFreak, and Arturia has included a whopping 21 different algorithms for you to load into them. These offer users a veritable showcase of all of the different synthesis systems that exist out there, from the more common approaches like subtractive and FM, right the way through to rarer and more exotic techniques such as additive, Karplus Strong and formant synthesis.

The algorithms can do more than just synthesis too: the first oscillator can load the Audio In algorithm, allowing you to process signals through the synth's engine, whilst six of the algorithms (four types of filter, a bit crusher and an FM/RingMod processor) are available only to the second oscillator where they process the output of the first oscillator.

Modelling and modulation

Arturia has a wealth of experience modelling synths, and they've brought this to bear on MiniFreak V's exceptionally accurate model of the hardware's analogue filter. Gentle settings give lovely, warm, wallowy tones, whilst at the other end of the scale, the filter drips with analogue grittiness and character.

Moving on to modulation, the synth offers a standard ADSR envelope generator, hard-wired

Arturia has included a whopping 21 different algorithms for you to load into the Minfreak V's oscillators

as the amp and filter envelope, as well as a so-called "Cycling" envelope. This is a three-stage affair that can be one-shot-triggered in the same way as a standard envelope, or that can cycle in an LFO-like manner. In terms of *actual* LFOs, MiniFreak V has two for you to play with. These provide a few shapes over-and-above the usual suspects – ramped sawtooth waves, for example – but their pièce de résistance is that they allow you to create custom LFO patterns.

Another source of modulation – and notes – is MiniFreak V's built-in pattern sequencer. This lets you define patterns of up-to 64 steps in length, made up of polyphonic notes and four controller lanes. The sequencer can run its programmed pattern as-is in a constant loop, but it's more useful when triggered and transposed by the notes you play. It also has an arpeggiator mode offering the usual up, down, up & down patterns.

Carbon copy

A three-slot stereo FX section with choice of 10 effect types rounds things off. This is most welcome, not because MiniFreak V sounds weak without the effects (it doesn't) but because the synth is otherwise entirely monaural. Having the built-in effects is so much more convenient than having to constantly add effects plugins every time you use the instrument.

Being based on a hardware instrument that's almost entirely digital – and entirely of Arturia's own design – means that there's no practical difference between MiniFreak V and MiniFreak. The oscillators, algorithms, LFOs, envelopes – everything barring the filter – is translated directly from the hardware, and you'd be very hard pressed to tell the difference in a listening test. Pairing the software with the hardware brings advantages of its own, but is in no way necessary to get the most out of this remarkably flexible, phenomenal-sounding synth. **cm**

Web www.arturia.com

MiniFreak hardware and software operate as a perfect partnership

A Perfect Partnership

It may seem unusual for Arturia to release a software product that appears to be competing against its own hardware, but it may actually be a stroke of marketing genius. You see, the two versions can be tightly synchronised when they're used together: the hardware provides a bespoke control surface for the software, whilst the software provides high resolution visual feedback of waveforms, envelopes, etc, as well as easy mouse-driven editing of things that aren't so easy to do on the hardware, such as programming sequences. Better still, you can have an instance of MiniFreak V pass-off its work to the hardware to take full advantage of its analogue filter stage – which is perfect when bouncing/freezing instrument tracks. No doubt, then, that Arturia will be hoping that MiniFreak V users will aspire to own the hardware too, whilst owners of the hardware would be daft not to grab the software for their own part.

MiniFreak V closely echoes the hardware's look and layout, but improves detail and visual feedback

Alternatively

Arturia Pigments
cm267 » 10/10 » €199
Few synths can match the shapeshifting abilities of Pigments,

BLEASS Megalit
cm316 » 9/10 » $99
Boasts twin wavetable oscillators and 130 foldable wavetables. Big sound and a small footprint

Verdict

For Algorithmic oscillators give wide variation of tones and timbres
Near-perfect modelling of hardware's analogue filter
Unconventional Cycling envelope and user-definable LFO patterns

Against Quite pricey
Synth engine is monaural

A near-perfect copy of the recently released hardware, it fully deserves its place amongst Arturia's upper echelons

8/10

Spitfire Audio
Albion Colossus

£399.00 PC MAC

Should the world ever entertain an Apocalypse, it's great to know that we have the correct scoring tools to hand. Spitfire's latest epic goes colossal!

> With the advent of the orchestral sample package, creators continue to find evermore ingenious ways of packaging up their samples, according to style and genre of music. No strand of packaging personifies this more than the Albion series from Spitfire, which now adds to its epic repository of sounds with latest volume, Albion Colossus.

There have been many packages prior to this, catering for extremities of volume and end-of-the-world scenarios, but Colossus adopts a number of facets which set it apart from previous examples.

Mirroring previous Albion packages, the sounds are curated across a number of instrumental groups. The largest of this is from the orchestral domain, with representation of strings, woodwind, brass and percussion. Also in common with previous Albion packages, instruments are mostly grouped by section, so you will find patching for High and Low Strings and Brass, but with the occasional breakout instrument, such as the French horn. The possible rationale here is that horns provide a slightly different tone coloration to trumpets and trombones, and it can be useful to have the option available as a separate entity. Flutes and piccolos also benefit from the breakout treatment, while there is an extensive percussion section, combining more traditional orchestral textures with junkyard percussion and a heavily effected drum kit. The package is completed with a selection of doom-laden guitars and synthesisers, for those apocalyptic drones that we are all so familiar with.

The orchestral elements provide a plethora of diverse colour, with plenty of scope for real-time control. This begins with the dynamic control. As anticipated, the modulation wheel controls

> Colossus can do subtlety, but you may be barking up the wrong Albion. This way lies monsters, and an epic battle on the horizon

dynamic timbre, with separate control of expression via MIDI CC11. But we now also have a Scale setting, which blends and fades between a chamber orchestra of 42 players, and a full symphony orchestra of 111. This can be controlled as a separate element, or linked to the dynamic timbre control, meaning that your sonic pallet can go from relatively small and chamber sized, up to epic proportions, in a very short space of time. Similarly, the depth feature fades between a close mic'd setting and more ambient, distant mic'ing. It's all a highly effective concept, which feels reminiscent of Spitfire's lesser-seen Aperture series of products, which tend to put in an appearance around their Black Friday events. In something of a departure from their norm, sampling sessions took place in the two performance spaces offered by the Glasgow Royal Concert Hall.

Colossus operates from within Spitfire's now familiar player. Where the plugin really draws you in, is with the extensive amount of real-time control. The large rotary pot in the centre of the plugin is switchable across a number of impressive effects. Compression, reverb and low-pass filtering are all available, and a curious effect called Hype. This effectively ramps up the density of your chosen sample, through degrees of saturation and distortion. The net result, when you go full-on Hype, is impressively dark and menacing in most cases, but alongside there can be an element of low-end thud, which might prove distracting in certain settings.

The colours for Colossus are nailed firmly to the mast, possibly more so than with any previous Albion suite. There are some very impressive timbral elements, with excellent percussion and synthetic colours thrown in for good measure. Colossus can do subtlety, but if that's what you're after, you are probably barking up the wrong Albion. This way lies monsters, and there's an epic battle on the horizon. Thanks to Spitfire, you now have the tools to score such a scenario! **cm**

Web www.spitfireaudio.com

The central pot may be assigned control the effects displayed below.

Keyswitching

One of the most useful features available to anyone scoring orchestral music in a DAW, is the ability to keyswitch samples. This is the process of switching from one articulation to another IE Bowed (Arco) strings to Pizzicato (plucked) strings. This often involves using redundant notes, at the lower end of the keyboard, which act as triggers to switch sample playback. The beauty of this capability, is that you can keep your track as a single entity, which can make it easier at the mixing stage. Sometimes, this isn't always laid out as you might like. For some reason, Spitfire have elected to group the instrumentation in such a way that you cannot keyswitch between long and short articulations. With a lack of multi-timbral operation, you will be forced to load a second iteration of the plugin. You can obviously work around this, but it does seem a little odd that categories would be truncated in such a way, and may have to do with sample loading and RAM allocation.

Colossus' orchestral elements provide a plethora of diverse colours

Alternatively

Orchestral Tools – Metropolis Ark 1
€549 + VAT
OT's first Ark is equipped with a choir and some of the most epic percussion slams we've ever heard

Audio Imperia – Jaeger
€599.00
Jaegar also veers toward the epic, through strings, brass and percussion

Verdict

For Huge dynamic scale and contrast
Sample representation from all orchestral sections
It's a concise suite, for an epic world!

Against Limitations to articulation keyswitching
Sluggish sample loading times

This is an impressive package from Spitfire, with nifty features that set it apart from other apocalyptic suites

8/10

MORE PRESETS
Here you can filter through presets and home in on a sound

PRESETS
Step through them here and click to initialise or save new ones

OSCILLATOR PARTS
One and two plus the main parameters to tweak

WHAT'S MODULATING
Not the name of a new game show (we wish) but these indicate what's moving sonically

PATCHES
Choose from your sound type and then scroll or search it

STRANGELY ATTRACTIVE
... graphics to stare at for hours/days

EFFECTS
Simple controls to take main effects to the clouds

MAIN OPTIONS
Click on these for arpeggiator, oscillator extras, filter, FX and modulation

MIX IT UP
A simple Fade dial to mix between oscillators

WOW OI YOU YOW
Yes you can do vocal effects within the Vowel section with Formant dial

Tracktion/Dawesome Kult $129

PC MAC

With 'Strange Attractor' oscillators – 30 of them – plus easy FM and AM synthesis, Kult might well be the synth of the year. And it's only March

> Where to start with Kult? For a start, it's produced by Dawesome (aka Peter V and in conjunction with Tracktion). He produced the exceptionally well regarded Abyss and Novum instruments, and also appeared in the exceptionally well regarded *Computer Music* magazine last month. Kult takes the brilliantly colourful UI philosophy, applies it to Strange Attractor (or Strangely Attractive) oscillators, makes AM and FM synthesis easy, modulates madly, and adds effects and more aplenty. Pretty much before it gets out of bed...

It *is* Strangely Attractive

Peter is a bassoon and contrabassoon player, orchestral oddities in themselves. Kult is similarly, and maybe relatedly, an oddity for synths. And all the better for it.

Spawned somehow from the mathematical theory of chaos (that's what it says in the manual which, for once, we urge you to read), the two Strange Attractor oscillators can be warm or in your face. They are also alive.

Select two from 30 and apply some F-Shift and their frequencies will gradually or quickly start evolving. Another option, S-Shift is, according to the manual "hard to explain" (well you try writing this review, mate) but essentially applies an LFO to the phase. So you already have modulating oscillators, and being so alive, they almost negate the need for further modulation, but by now you've probably realised that avoiding extra layers of sonic fun ain't something that Dawesome does.

So far so good then. But there's (a lot) more. As well as adding sine and square characteristics to your oscillators, you can also

See the entire essence of life itself transform in front of you. You are a god. A god of synthesis

blend, tune and shift the phase. Going deeper, why not create five copies of an oscillator for unison effects? Better still, introduce a fabulous FM character, or tremolo via the AM section. You can even add vocal-like sounds via the Vowel and Formant options.

Beyond this, you get a fully-featured Filter section, complete with two independent 'analogue' filters, plus Comb and Distortion sub sections. There are stereo effects that, at their wettest, quite literally take you to the clouds. There's also a lovely looking arpeggiator and, remember we said you didn't need further modulation? Yes, there's a modulation section too. Simple and very effective.

It sounds and looks...

By now we're thinking that Peter might well have been having some pretty spectacular dreams (aka hallucinations) while coming up with the ideas for Kult. Indeed the whole thing is amply summed up by the graphical Strange Attractors that take us back to 1990s club-land – the kind of swirling visuals that we would stare at for hours before claiming that we'd seen all of reality within them. Heady days. But these Strangely Attractive graphics really do give you an idea of what is actually happening to the sound as you (inevitably) tweak it. Or they did for us anyway.

And what a sound. We'll detail the character more in the box (right), but those of you happy with tweaking a filter cutoff and resonance dial to make a sequence evolve will have almost too many options. Sounds can be transformed from warm to out there, jarring to angelic. You might not always know what you are doing but the point is to get in there and do it; tweak more than you ever have done. Watch the graphics. See the entire existence of life transform in front of you. You are a god. A god of synthesis. A Strangely Attractive one at that. **cm**

Web www.tracktion.com

You can select sounds in a variety of ways, either by filtering or listing, and most are exciting, dramatic and evolving . And they positively invite you to get them moving...

Kult classics?

Tracktion say that Kult evokes the experimental sound of the West Coast Buchla modular synth systems, and we certainly go along with that. It's all about messing and twisting in real time, so much so that the presets are almost to be disregarded. You can simply load one up and quickly go into so many other directions that you'll come up with tens if not hundreds of ideas you might want to save. But we'll try and sum them up anyway. The bass sounds are often readily arpeggiated, so inviting you to start tweaking as the sequence of notes plays. Many of the other categories – Brass, Drone, Pad, and Lead in particular – tend to focus on the more edgy or experimental side of the sound, so end up being more like atmospheric pads (on top of the Pad section). This is fine in our book as, again, this is all about using whatever sound as a very rough base and taking it, well, God knows where to be honest. So while the presets are excellent, it's really about that word: 'journey'.

Alternatively

Audio Damage Quanta
cm261 » 9/10 » $99
There's little else like Kult, but Quanta also has the same experimental ethos

Spectrasonics Omnisphere
cm220 » 10/10 » $499
We often put Omnisphere in as an alternative to a synth simply because it is every synth. Lazy, we know. And not the first time we've done it...

Verdict

For How much stuff can you do to a sound in real time?
More evolving than humanity
We want whatever Peter's having
Look at the graphics!

Against Er...

We're so pleased that Kult delivers everything we hoped for and more, mainly so we can say 'Dawesome is Awesome'

10/10

Click any of the tabs beneath the Strange Attractor graphics to open other main sections including the ARP as shown

CHOOSE YOUR PACKS AND SOUNDS
Click here to see your purchased (or free) packs and the sounds within them

PRESET CREATIONS
Options for saving sounds, randomising functions, freezing parameters and more

OPTIONS & HELP
A great Help system, while Options allows global function like UI size to be edited

CLICK TO OPEN…
… a second window for Tuning, Voicing and Design. Here you can select hammer hardness, soundboard and resonance options

THE STUDIO
The Modartt studio is certainly getting fuller now we're at v8!

VELOCITY AND DYNAMICS
Make changes to those here

EFFECTS
Access more effects including global ones and those just for notes and some specific for your chosen pack

MINT OR WORN?
As with the new Guitar Pack you can introduce more noise by sliding to the left here

OPTIONAL EXTRAS
Some features here will not be available in all Pianoteq versions, but this is Pro and has everything

Modartt **Pianoteq 8**

€139 to €799 PC MAC

The highly-regarded piano – and so much more – instrument reaches version 8, but is Pianoteq still one of the best you can buy?

> We have, we admit it, been huge fans of Pianoteq for many years. It's a light-on-your-processor-and-hard-drive piano instrument that has matured to be a lot more than that actually sounds. As well as encompassing just about every piano type you can imagine, it now stretches its remit across chromatic percussion, harps and a lot more. With all of these additions, Pianoteq should really be called 'Instrumentoteq'. Only that sounds rubbish.

Just about the only complicated thing about buying Pianoteq is the level you buy in at. We'll detail more on this in the box opposite but there are four entry points. Each one gains you access to a free pack of 14 varied instruments plus access to more packs depending on your purchase level. Add more instrument packs from the 20+ now available at any time should you wish. It's a highly flexible way to buy and you can really home in on your key favourites.

For our test we have the Pro version loaded up, complete with the extra edit features, so we may discuss some features that aren't in the cheaper versions, so do check before you buy.

What's new in 8?

As well as refining the main engine of the software, Modartt have added a Classical Guitar sound pack to the options available. This is stretching their remit further and certainly an indicator of where v9 could take the software.

And in case you were worried that the standard piano key Pianoteq interface might not handle playing guitars, you also get a new fret-based playing surface to trigger the sounds. This proves particularly useful with some of the sounds. With the arpeggiated ones, for example,

> **With all of these additions, Pianoteq should now be called Intrumentoteq. Only that sounds rubbish**

it's great to see what you are triggering. It will also be a bonus for proper players.

As to the sound of the guitar, it is pristine and nuanced, with delicate string movements. There are extra tuning options and a very neat touch is the Pro and Casual slider that adds more realistic noise, as you become less professional in your playing. It's very realistic and a neat touch. It's similar to the effect you get on the piano-style instruments that introduce noise.

Back to the pianos

And we really should, of course, focus back on the piano and other packs, as this is where the real strength of the software has always been. With the acoustics, as shown in the top right picture, there really is no stone left unturned now, with every major model here, and many endorsed by the companies that made the originals: Steinway, Bechstein, Petrof and more.

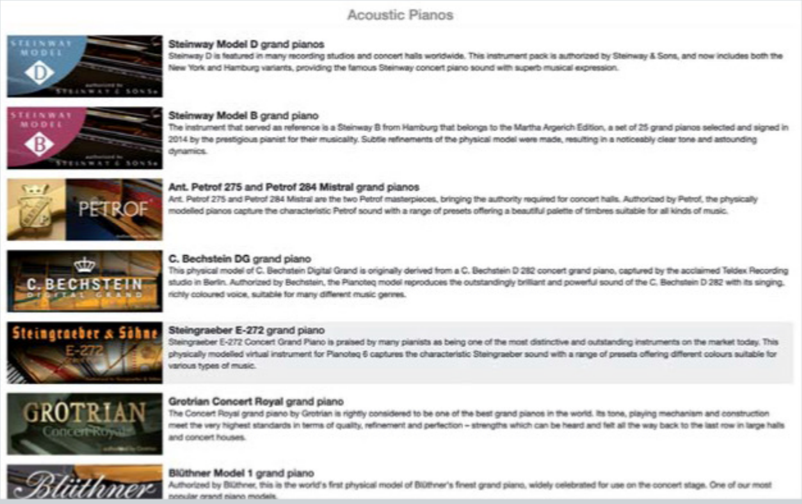
About the only thing we can add, on top of how much class and realism they will bring to your piano sounds, is how surprised you might be by the varied sounds, and what you can do with them. Acoustics have never sounded so good and if you think your standard DAW piano is good enough, then think again.

Some of the Chromatic Percussion sounds are great too. And of all of the packs, only the Steel Pan pack is one we'd perhaps not use much. That might be us, though; it sounds top-notch and is there if you want it.

Conclusion

This is, surprise, surprise, as good as it ever has been, and with the guitar inclusion, we could add 'and always will be', such is the future light which that inclusion shines. It's by no means an essential update – hence not a perfect score – and prices have inevitably risen, but this is as near perfect a collection of piano (and more) instruments as you'll find. Brilliant-oteq! **cm**

Web www.modartt.com



Selecting which packs from the 20 or so on offer might determine which level of Pianoteq you go for. These are just a selection of the Acoustic Pianos on offer. There are also electrics, harps and more

Which Pianoteq?

You might be slightly confused by the four levels of Pianoteq on offer when you are first faced with the choice, but actually it's pretty simple. With any level you choose, you get the free pack of 14 instruments. Choose the cheapest Stage version (€139) and get two more packs from the 20+ on offer; select Standard (€269) and choose three extra packs; Pro (€399) and choose four packs; and finally Studio (€799) and get all 20+ packs. If you really know your instruments, you might also be tempted to go for the more expensive entry points as they unlock extra features like tweaking models, advanced tuning and mic positions (for Standard) or 192kHz audio and overtone editing (for Pro). As to which one is good for you, check out the 20+ packs to choose from. We're not convinced all are worth having – the tyranny of choice could slow you down. So maybe go for a cheaper option to start with and buy packs at your leisure for a very reasonable €49 a go.

The new Classical Guitar pack features a fretboard, so you can strum, pick and choose as much as you like

Alternatively

Your DAW piano
There's no getting away from it: the big DAWs now have great pianos included for free (but, really, they're not as good as Pianoteq)

Spectrasonics Keyscape
cm312 » 9/10 » $399
36 separately modelled keyboards ranging from Wurlitzers to Fenders, toy pianos to Rhodes with a huge number of pianos

Verdict

For Slick, refined and as sleek as ever
More pianos – and other instruments – than you could ever wish for
Classical guitar pack is fab
Good range of purchase options

Against Not an essential update

Modartt's Pianoteq is reaching the piano ceiling, but successfully branching out into other rooms, and it's as fabulous as ever

9/10

Audient iD24 £299

PC MAC

If input audio fidelity is important to you, Audient's latest analogue-inspired desktop interface could be exactly what you need...

> Audient's iD range of interfaces offer a decent blend of audiophile electronics, solid construction and handsome looks. Nevertheless, in recent times it's been their Evo units grabbing the headlines, with the Evo 16 in particular offering incredible value and flexibility. Thankfully, Audient is also gradually upgrading their original generation iD units, and the latest one is the iD24, which replaces the iD22.

The iD24 is a 10in/14out 24bit/96kHz capable USB 3.0 powered audio interface. On the input side it features two of Audient's highly respected 8024 Class-A mic preamps via combi connectors on the back, and one front-mounted JFET-based instrument input, which when plugged up replaces mic input 1. Both inputs also include balanced inserts on ¼" TRS jacks.

For outputs you have two stereo pairs which can be assigned as Main and Alt monitors if you wish (see boxout). There's also one headphone output but with two sockets (¼" and ⅛") that you can use simultaneously. Completing the I/O are a pair of ADAT connectors (ADAT and S/PDIF compatible) and for system clock integration you've also got a Word Clock output (this is a new addition on the iD24).

Much like the MK2 iD4 and iD14, which appeared about 18 months ago, the iD24 has overhauled electronics. This means improved signal to noise ratio, better dynamic range (now 122dB ADC and 126dB DAC) and improved headphone output. It's also USB-powered (remember, the iD22 has an external PSU), which means you'll need a USB 3.0 connection to provide enough power. That said, although it's not officially supported, we did get it to work using a USB 2.0 connection.

The iD24 is solidly built with a hardy metal case. It's functionally immediate with individual channel switches for 48v phantom, low cut filter (100Hz) and -10dB pad. These are joined by dedicated monitor dim and cut buttons, three assignable function buttons (see boxout), and physical controls for channel gain, headphone level and monitor output.

The monitor knob is also a continuous controller, so with the iD button selected it will duplicate the scroll functionality of your mouse, which can be handy for DAW navigation or in other apps. Rounding things off is a 7-part stereo LED output meter with USB connection indicator. Alas, there is no panel top input level meter.

An attractive balance of features with a heavy focus on a genuinely audiophile front end

The analogue front end delivers a healthy 58dB of gain and Audient quotes an impressive frequency response of 10Hz to 40kHz (+/-0.5dB). The Class-A mic pre is a big draw for this interface and as you would expect it handled our phantom powered mics excellently, with heaps of headroom and a suitably neutral profile. But it's also got plenty of gain for lower output dynamic mics or instruments with passive outputs. If you do happen to clip that JFET input, it still sounds pretty acceptable. Factor in the balanced insert point and we can't think of a more audiophile interface at this price. What's more, these core features are admirably enhanced by the software support (see boxout).

Overall, the iD24 brings this unit in line with other 2nd generation iDs, offering an attractive balance of features, with heavy focus on a genuinely audiophile front end – which we love – and well-designed software handling additional features such as cue mixes and signal routing. **cm**

Web www.audient.com

Set up your cue mixes and main mix in the software mixer

Software support

Audient's iD software application handles all the features that aren't covered by the panel switches and buttons, including input phase invert, +10dB digital gain boost and internal loopback source. The main panel includes both the output mix and two minimal latency cue mixes. For each of these you can combine analogue and digital inputs with up to six mono DAW streams, and in each case, adjacent pairs can be stereo ganged. In the master section on the right you can assign the three panel function buttons. iD's System Panel has a slew of settings including the primary routing options, and you have full flexibility to re-route the available streams to match your workflow. For example, this is where you define your Alt Speaker output, which mic will be used for Talkback (including your computer's internal option) and also where you want each of the Cue mixes routed. Couple this with the assignable panel function buttons and you have a very powerful system.

iD24 includes flexible output routing that you set up in the software system PA

Alternatively

SSL 2+
£249
More limited connectivity but a quality device with a decent SSL front end

Black Lion Audio Revolution 2x2
£349
A simple 2in/2out device that delivers the audiophile results you expect from Black Lion

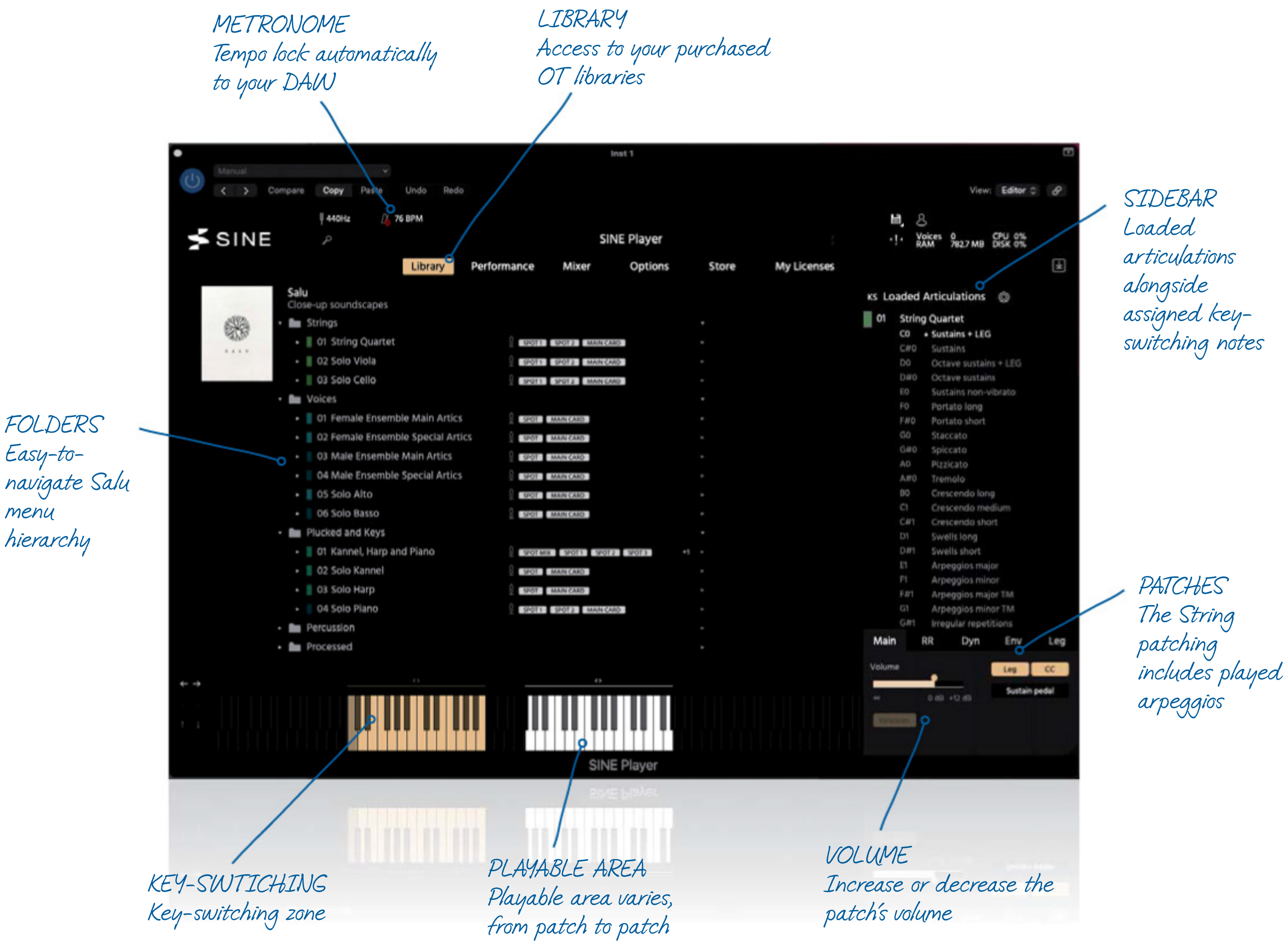
Verdict

For Audient's excellent Class-A mic pre
Functional and tactile top panel
Balanced analogue insert points
JFET instrument input
Flexible software-driven routing and configuration options
Integrated talkback functionality

Against Bus powering requires a USB 3.0 connection

The iD24 is a flexible interface delivering good value for money. But the audiophile front end really marks it out and that's why we've given it full marks!

10/10



Orchestral Tools Salu €399 +VAT

PC MAC

If you've ever wondered how an eclectic selection of close-up acoustic samples might sound, you're in luck!

> Orchestral Tools have always strived for perfection, notably through their fine collection of orchestral libraries, recorded at the Teldex scoring stage in Berlin. With a change of location, their latest project is described as 'Close-up soundscapes', and what better way to deliver this than from a location that really gets away from it all...

Salu-tations!

Salu is a beautifully eclectic library, exclusively recorded at the Arvo Pärt centre, which is set in the heart of a pine forest, 40 minutes away from Tallinn, in Estonia. Described as a cultural space and creative environment, this exceptional venue offers performance spaces, perfect for creating a contemporary sample library, employing a diverse collection of exemplary musicians.

Installed within OT's Sine Player, there are five distinct instrument groupings; String Quartet, Voices, Plucked & Keys, Percussion and Processed. In all instances, the acoustics are up-close, personal and relatively dry. We are talking about small groupings of instrumentation, which begins with a string quartet. There's an abundant set of 24 different articulations, captured from the M4gnet string quartet. While this includes two violins, it is the Viola and Cello that get the individual treatment, with a secondary-salvo of solo content, alongside the full ensemble.

The sonic identity is impressive; the purity of sound is undeniably contemporary, stylish and focussed. Apart from some very useable legato options, which includes octaves, there is the usual set of shorts, longs, plucks *et al*, plus a batch of swells, repetitions and irregular articulations. Anyone *au fait* with current TV

"There is much to call upon from these high-class samples"

soundtrack trends will hear immediate inspiration from the more abstract selections. There are played arpeggios, in both major and minor tonalities, which tempo lock to the DAW, although the triplet incarnation of arpeggio can sound a little truncated at speedier tempi.

Vocal-ease

The next section focuses on voices, with samples drawn from the impressive Vox Clamentis choral ensemble. The previously mentioned purity continues here, with shorts and longs, the latter forming beautiful pads, using 'Ehs', 'Ahs' and 'Uhs'. The Hummed Crescendos are also impressive, while the Sustained Legato patching is sublime, albeit sluggish in use, as is often the case with legato patching. There is a small amount of dynamic timbral control in this setting too, but in keeping with Salu's ethos, it's calm and subtle.

Plucked, keys and perc!

The up-close journey continues, with combined samples from Harp, Piano and an Estonian instrument called a Kannel. It looks much like a dulcimer, but is played by plucking the strings. These three instruments are also combined in a sampling combo, or available as separate entities. Meanwhile the Percussion section features 11 different instruments, from Tubular Bells and Glockenspiels, to the Thundersheet and Wind Gong. There's even a beautiful vibraphone sample, played with a string bow.

Final processing

While the content contained within this library is overtly acoustic in nature, the final section described as Processed, yields an amazing bounty of sounds, collated into adjective-inspired menus. The content remains acoustic, but the reproduction feels otherworldly, verging on electronic. Moreover, dicing with the modulation wheel will reveal layers of interest in timbre. States vary from dreamlike and icy, to tense, dark and brooding.

Welcome to the jungle: the Arvo Pärt Centre in Estonia

In Pärts

Arvo Pärt is a classical composer, who was born and raised in Estonia. He has the accolade of being one of the most performed living composers in the world today, only placed in second position by film composer John Williams. While he is cited as a considerably influential figure in contemporary music, his compositions often draw inspiration from Gregorian chant, among other musical sources. You can hear the influence very clearly in some of his work, such as one of his most performed works, *Fratres*.

The Arvo Pärt Centre was established in 2010, as a location for creativity and music making, with the new and current building opening in 2018. Located right in the heart of a pine forest, the building coexists with the forest, its canopy melding with the line of the trees. It provides the perfect ambient location to inspire creativity, while also providing some exceptional spaces for recording sand sampling. Should you find yourself in Estonia, the centre is open to visitors, and will likely recharge the inspiration batteries.

As a library, this may not appeal to all; its acoustic calling card, adopting an intensely personal stance, provides some astonishingly high-class samples. There is much to call upon here, for the contemporary composer, anyone writing music with a media slant, or just producers looking for pure sounds, derived from interesting acoustic sources. Despite its traditional point-of-origin, it will go way further than you might think, in production terms. **cm**

Web www.orchestraltools.com
Info Single instruments from €22

The Processed section delivers a convincing collection of treated acoustic instrumentation

Alternatively

Cinematic Studio Series – Solo Strings
$299.00 + VAT
This extensive library provides patching with an amazing amount of realism and expression

Spitfire Audio – Eric Whitacre Choir
£549.00
A collaboratively produced library of choral samples, with controllable expression and purity throughout

Verdict

For Stylish sampling suite
Plenty of instrumental variance, across the library
The purity of the instrumental/vocal tone is stunning
The instrumentalists employed here are of the highest calibre

Against Won't be for everyone, but we'd recommend exploring

Salu sits proud by providing some of the classiest acoustic samples we've heard, from a location which oozes creativity

9/10

Fluid Audio Image 2 £1,799 PC MAC

Fluid Audio might well be known for less costly speakers, but Image 2 will certainly change that… and possibly the world of studio monitoring

> With studio speakers like the FX80 and C5 costing no more than $249 a pop, Fluid Audio are one of many speaker manufacturers battling for the cash of a home or project studio user. Good speakers, at sensible prices. With their Image 2s, they are turning their backs on low prices and welcoming a new future. And at the best part of £2,000, they ruddy well should be.

It's fair to say that it's rare that we include gear of this price, but we do like cutting edge technology and not only do the new Image 2's offer a novel twist on studio monitoring, they also come with a big software option: Fluid have teamed up with Sonarworks, so you can use their SoundID Reference room calibration software which is embedded in the DSP inside the Image 2. And there's more…

A new world

Studio monitors are supposed to deliver flat responses so you can hear all the detail in your mix and act accordingly; they should be honest so you mix perfectly. However, many studios like to have a secondary set of (arguably) not so good monitors to emulate the typical midrange playback speaker systems used by many people – we don't all have great studio monitors to listen to music, after all. Some studios therefore mix with a second set of midrange speakers like Auratones, NS10s or Avantone Mixcubes, as these emulate more real world situations. If you can get your music sounding great on these *and* your studio monitors, you are onto a winner. The key selling point with Image 2 is the 'Cube' mode, that emulates these smaller speakers so you are effectively getting both your A-B

You are effectively getting two sets of monitors to compare... which could possibly justify the price

reference monitors in one package. That could, then, almost justify the price...

Normal operation

You might not be surprised to find that in 'normal' mode, these speakers sound phenomenal, with all the clarity and imaging you could wish for. The flat response is undeniable – and can be flattened more with Sonarworks' help (see right), but is not too harsh – often a problem with flat speakers. The 8-inch bass drivers are built into the sides of the speakers (not a first, but rare) and deliver controlled and low distortion bass frequencies.

Mixcube operation

Enter Mixcube Mode by way of a footswitch (supplied) and the midrange driver becomes the main playback vehicle – with minimal input from the other drivers, at least initially. And it is obvious when this mode kicks in. Initially you might be tempted – as we were – to go all out with your mixing, trying to create more bass somehow, but we were certainly quite wary of doing this, just in case what we did affected the overall mix too much.

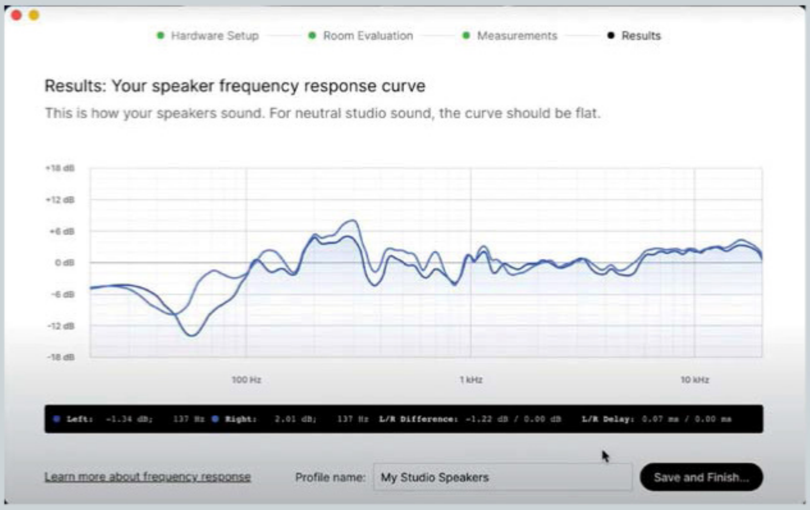
But, actually, the idea of effectively disabling your low and high drivers allows you to focus more on the mids, so could give you a better resulting picture overall. This probably shouldn't be unexpected as 3-way speakers will often give you much more joined up mixes over 2-way. They deliver more of a middle picture, so more of an even response overall, and what this Mixcube Mode is effectively doing is allowing you to give that middle more attention. Or at least that's what it felt like to us! And after returning to 'normal' mode, it did feel like we had a more cohesive mix but with some caveats – see below. But of course the main advantage of this mode is that it gives you an idea of how your mixes will sound on less well-endowed speakers, which is the real point of it, so it's certainly something worth having.

The 8-inch bass woofers are mounted in the sides of the speakers and offer an extended bass response

Two become one?

Fluid Audio call these 2-in-1 monitors, and the Mixcube Mode does open up a window to another speaker set-up, ideal for a new perspective. We were, however, worried that by tweaking too much here, you could affect the main mix, so you'll have to strike a balance and experiment with your Mixcube mixing before making dramatic alterations in either mode. You'll also have to strike it rich because you are paying big bucks for the idea of switching between two monitor modes – this is a price per speaker, remember! At the moment, then, Fluid Audio offer two extremes of pricing with little within the $249 or $1,899 price points. So we can't wait for them to introduce Mixcube Mode to a model that sits between the two. So as much as Image 2s are a great glimpse to the future of comparative monitoring, it's one that might be worth waiting a little longer for. cm

Web https://fluidaudio.com



The Sonarworks SoundID reference software might pick up that your frequency response – like this one – is less than flat, but it can feed this back to the Image 2s which calibrate accordingly

More hi-tech extras

Fluid Audio have teamed up with Sonarworks to integrate SoundID Reference software into the speakers. This can auto-calibrate the Image 2s to your room in a similar way to the ARC system we recently reviewed with the KRK GoAux 4 speakers from KRK and IK Multimedia iLoud Precisions. SoundID Reference goes a little further though. You can easily calibrate the system with many types of available headphones. So if you use a set of 'phones on the Sonarworks list, simply select them and the software will adjust playback to make what you hear more honest and flat – great for mixing. With speakers, though, you have to go through a calibration setup, with a measuring microphone picking up different frequency tones and feeding back to the DSPs in the Image 2s. The speakers essentially self-adjust their frequency response to account for your acoustics – issues and all. *Et voila*, you have a flat response whatever your room issues, and much better mixes!

Alternatively

IK Multimedia Precision 6
cm316 » 9/10 » ¢999
Not three-way speakers, but these do feature a speaker callibration system and sound excellent

Genelec SAM range
From around £1200 a speaker
Includes an amazing calibration system – one of the best out there

Verdict

For Incredible sound, even without the calibration software
The Mixcube Mode is a great feature
Fantastically well-built speakers

Against Expensive monitors
Might be too big for your mix room

You might be paying for them, but Image 2 offer a glimpse into the future of comparative monitoring and sound fab

8/10

Soundware round-up

Audiotent
Opus $56

Big ol' bunch of beefy presets for the OP-Xa – the growling beast of a synth from them cats at Arturia. Inside the pack, you get low subs and bottomless bass from the bowels of beyond, moody middle ground courtesy of a fine pick of pads, and some terrific tops and lead lines to tickle your higher branches and other hard-to-reach spots in your audio spectrum. With 107 options to wade through, you're more than sure to find some twisted sounds to warm up your track cockles. And, with bonus preview WAVs and a sneaky batch of melodic MIDI files, you get an extra bow to tie it all up with, too.

www.audiotent.com

9/10

Zenhiser
Crate £44

These noise ninjas don't often step into the realm of rap beats. But, when they do, they remind us all that they can turn their finely toned fingers to any style they darn well please. In this dusted hip-hop selection we get 3.5GB of track-starting (and finishing) wonked out and soulful loops, smoked out soundscapes, analogue kit riffs, and plenty of other grooves to help you stand out in the lo-fi landscape. The flavour is feel-good. With warmed up and positive chords to the left, and 100+ drum styles to the right. Dig in.

www.zenhiser.com

8/10

UNDRGRND Sounds
Breaks Techno 2 £34.95

More bonkers beats for techno heads with nothing to fear. Across the hundreds of loops and one-shots inside we bash through genre walls, pinching the best bits of each for maximum dancefloor devastation. Broken breaks that make you say 'Amen!' sit alongside bad-to-the-bone 4/4 kick-heavy stems. As rave-ready synth stabs and goose-pimpling tones and textures hold hands with rush-inducing housey melodies and arpeggios. The bass an't no slouch, either.

www.undrgrndsounds.com

8/10

Sound Ghost

Lofi Garden £20

Well-trimmed collection of green and pleasant production tools for the lo-fi crowd. From blooming great bass loops, to some well plucked guitar picking and playing, there's enough to loop and layer into the back or front of any chilled-out track. The full selection comprises 200 electronic and organic-sounding samples and instruments, with everything whipped into shape and warmed to the highest standards by some very safe pairs of hands. There's plenty of lush and jazzy colours to catch the eye and fill the nostrils. So, kick off your shoes and take a sonic stroll through the wonders within.
https://soundghost.net/

7/10

Sample Market

Tech House Vocals £35

Sassy female vocals to furnish your next tech house banger with. Most come dry as a bone, so you can wash and work them with your fave FX and delays. And each performance is cool and classy, with all the cheese left in the fridge. Some longer leads are full of driving energy, but not over the top, while the more standalone have a slightly darker vibe. If you're after 200-ish vocals and adlibs to build a track around, you won't find a better selection than those mentioned in this paragraph.
https://samplemarket.co.uk

8/10

Sample Tools by Cr2

Essential House 2 £15.99 or (300 Credits)

House music all night long, as we continue to pump the party in part two of this club-friendly series. Just like the first, we're into big and bangin' territory from the off (just how we like it). And, across the 350+ files, we find more than enough hits and loops to make the speakers shake and people go "Ooh! Ooh!". There are hard hitting drums, bass stabs and melodies, and cherry-topping FX and synth lines. Plus, six 'songstarter' kits that make the whole thing a doddle to do. Bring on Vol.3!
https://sampletoolsbycr2.com

7/10

Bingoshakerz

Modern Funk $20.95

Kick off your platform shoes and take in those bell bottoms. Springbok Records head-honcho Stephane Deschezeaux is here to bring the funk bang up to date. In this cool collection of nu-disco-style riffs and rhythms you'll find her modern flips and polishes to that old skool 'on-the-one' sound. Drag 'n' drop the deep analogue bass bizzyness, brass, and chunky guitar twangs next to killer keys and stellar synth slides. And throw down some fly drums alongside clav grooves that would make Stevie smile. And that slapping bass is ready for its close up, too.
https://bingoshakerz.com

7/10

Soundware round-up

Beatport Sounds
Yulia Niko – Melodic Minimal £29.95

A kick-ass course in underground techno tutelage from famed DJ and producer, Yulia Niko, in which the Watergate club resident and former dancer continues to prove she knows a thing or two about captivating rhythms.

In this artist pack she looks backwards and forwards in her musical career, stopping in at any point that helps define or showcase her tastes. And, with these hypnotic melodies, electronic sparks, and steady drums, you'll be glad you checked in. Inspiring stuff, chugging at 122bpm, with sanctioned stops at all things deep and daring.

https://sounds.loopcloud.com

8/10

Minimal Audio
Element $10

Purse-considerate producer pack of deep and downtempo sounds. It might only be ten bucks, but this one is filled to the line with low-slung drums and breaks, soft on the loafers melodic loops, and a cavalcade of calming strings. The basslines are suspenseful, and any toppy plinks and plonks are pensive and filled with character, too. A textured body of enlivening loops, then. Crafted with thought for modern beatmakers. Sign up if you're after organic track thickeners, and much mood-enhancing music to run at your more thoughtful and atmospheric arrangements.

www.minimal.audio

7/10

Blind Audio
Psychedelic Acid Techno £14.95

Acid tracks, tweaked by those that care. And run through the musical mill of those that were there, man. Or, wish they were. Under the hood you're greeted with twisted 303s, trippy synth sequences, and a bevy of buzzed up bubbling bleeps and bells to freak out to. Everything marches towards you at 130bpm, and sticks to the clubby key of Gm, so everyone easily makes friends with each other. Besides Rolands in its roster, this title takes in real-world instruments, and flipped field recordings, for extra dimensional textures. Have half.

www.loopmasters.com

8/10

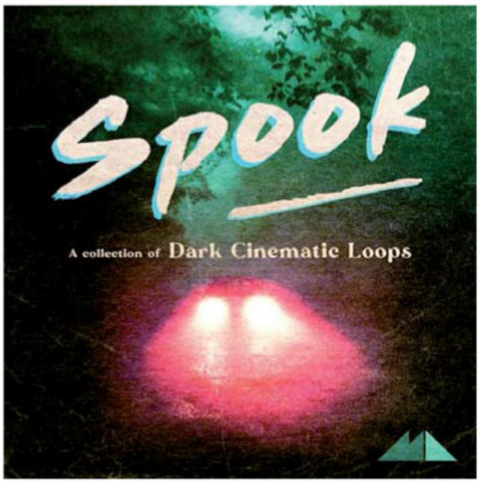
Hydratek

Vital €29.99

Neuro madness fever hits us now, as the spellbinders at Hydratek fill our minds with more bass presets for Vital. Fans of their last pack for this synth will love the sequel. And be more than familiar with the type of quality patches they perform, and the special macro settings they offer up. The 100 key-labeled loops showcase the sounds divinely. And the bundled demo mix and descriptions on hand will make sure you know all the rules, before gleefully breaking them. Saddle up, and start designing futuristic bass music… today!

www.hydra-sound.com

8/10



Mode Audio

Spook £18

Horror-themed samples, full of foreboding pads, sounds and instruments, hell bent on forcing the hairs on your arm straight out your skin. Finger through eerie ambience loops, dark drum patterns, and music loops fit for framing unspeakable scenes in a film about an abandoned cabin in the woods. Menacing chords and stabs underpin synth-heavy twinkles, devoid of hope. As '80s slasher motifs and other familiar but frightening musical tropes rise and fall in this ghoulish score.

https://modeaudio.com

7/10

W. A. Production

Bass House Battalion £24.90

Batten down your hatches and bunker up with these military-grade bass house beats and samples. Among the track ammo in stock you'll find weaponised sounds that take in vocals, leads, drums, synths and the titular bass loops. Plus, MIDI and 50 presets for any Serum soldiers out there.

The main melodies are thick and fiery, and all the kicks in this stacked pack rain down like bombs. Man up with the rabble-rousing FX builds and drops, and you'll have flanks of funk to throw at any wide-eyed club kids rampaging towards you.

www.waproduction.com

8/10

Best reverb plugins

We reveal the best plugins for adding atmosphere and pro polish to your mixes! It's time to make 'space' for these on your hard drive

Using a great reverb plugin is the best way to transform dull and lifeless tracks into more atmospheric and 'human' mixes. Reverbs create the sound of a room or space, emulating the reflective atmosphere such a space would impart to a sound recorded within it. They therefore add realism and character, helping to make cold and clinical digital recordings warmer and more emotional. Here, we round up the best reverb plugins to see which ones bring the best character and sound for your money.

In this buyer's guide, we have reverbs of all budgets and types that deliver the sounds of spaces of all shapes and sizes – everything from real recording studios and concert halls to unreal worlds straight out of your imagination. We've included some classics that are still going strong after many years plus the best releases that we've encountered more recently.

We also have more advice on choosing between the main two types of reverb – convolution and algorithmic. There's more info on that difference on the following page. We'll before reviewing all of our reverb choices in detail over the following pages, so make some space!

Buyer's advice

What is a reverb?

Reverbs recreate the 'sound' of a real or imaginary space. Whenever you sing or make a sound within that space, the environment around you has an effect on that sound. Put yourself in a room and any noise you make will be reflected off the walls, ceiling and floor back at you, with reflections joining forces, mixing and eventually scattering and dying down. This reverberated effect can add everything from a more 'real world' spatial sound to huge amounts of reflective atmosphere as the room size gets larger. Think of a cathedral, for example, and your reverb will generate many reflections and long decay times.

Your DAW will almost certainly come with at least one stock reverb plugin, and while it probably delivers decent results, there are now so many great reverb plugins out there – and covering all budgets, from free upwards – that there's no reason why you shouldn't consider adding more reverb options to your music production arsenal. A new reverb can give you a better sound and perspective, and deliver everything from tight and subtle reflections, to sounds that are literally out of this world.

Reverb types

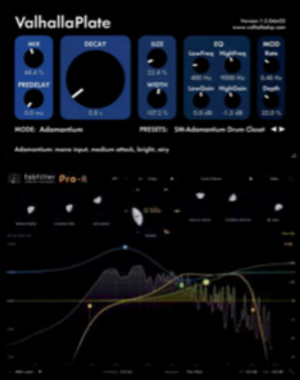
There are two main types of reverb plugins: algorithmic and convolution. Algorithmic 'verbs use mathematical modelling to simulate the sound of the space (real or imaginary), while convolution reverbs use impulse responses to measure the sound of a real-world space or piece of gear. You could think of this as sampling the sound of the room, as these IRs can then be applied to your recordings.

Convolution reverbs are usually based on real spaces or hardware reverbs and are often considered more natural and realistic, but only for the specific spaces or gear. Algorithmic reverbs, on the other hand, are more flexible and can be more extreme; less natural, for specific spaces perhaps, although they can still be used to model specific rooms and gear. However, because of their extra flexibility, they can be better for sound design. There are an increasing number of newer reverbs that attempt to fuse elements of both types of reverb, some more successfully than others.

There are more algorithmic reverbs out there than convolution, and this is also reflected in our buyer's guide. We would also consider these the best options for newcomers to reverb or those after a more general sound – another reason for our algorithmic focus.

If you want to buy more reverbs that emulate specific gear or locations, there are plenty on offer from the likes of Waves (IR-1), LiquidSonics (Reverberate 3) and AudioThing (Fog Convolver). Universal Audio have reverbs that emulate just about every piece of classic hardware and studio space you can imagine, often employing the company's exclusive Dynamic Room Modeling engine – a "combination of signal processing and advanced measurement techniques".

All of the reverbs that you'll find in our buyer's guide are paid-for options, but there are plenty of free reverb plugins out there, too. Our favourites include TAL Reverb 4 (www.tal-software.com/products/tal-reverb-4), u-He's Protoverb (www.u-he.com/products/protoverb), and Valhalla's incredible Supermassive reverb (www.valhalladsp.com/shop/reverb/valhalla-supermassive).



Computer Music top picks

We have reviewed a vast range of reverbs for a wide variety of tasks, but you could arguably split all of them into three categories: mix, creative and emulation. Our favourite reverbs for the former category are still the mighty Valhalla DSP Valhalla Plate and Fabfilter Pro-R. Both developers have such form in software effects that you are pretty much guaranteed great results with their logos on a plugin. Valhalla also has more great reverbs to choose from aside from Valhalla Plate, and in all honesty you can take your pick from any of them.

For more creative options, Eventide's Blackhole offers such extreme spaces and parameters that you can use it to travel through a universe of reverb options. Baby Audio's Crystalline can be used both as a mix and creative option, but when used creatively you can use it as recklessly as you like, mindful that it contains enough easy controls to reel yourself back in time and space should you need to.

Finally for real-world reverbs, these really do deserve their own buyer's guide, but there is one that stands out here – and has done for a couple of decades – and that is Altiverb 7. With a still increasing number of real-world emulated spaces on offer you can experience a world of studio live rooms and opera houses and enjoy them from the comfort of your studio. This reverb might cost more than others on test here, but think of savings you'll make in travel costs...

Baby Audio Crystalline $99

PLUGIN FORMATS: VST/AU/AAX/RTAS | **PLATFORM:** MAC, PC

Baby Audio are one of the newer kids on the block but make some of the best plugins, and Crystalline is no exception…

With relatively simple and intuitive controls, but powerful audio processing under the bonnet, Baby Audio put the music first and the science second. The company's Crystalline reverb is the perfect example. It's an algorithmic reverb with an attractive UI but delivers a Lexicon-style quality from powerful algorithms.

Crystalline's main controls are spread over four blocks: Reflections, Depth, Clean-up and Shape. They each feature three buttons that control parameters by clicking or dragging. You can, for example, easily tame Reflection amounts by clicking, or alter the Width parameter by dragging.

Parameter changes can be dramatic (Modulation adds fantastic swirl) or subtle (Smoothing makes the reverb less harsh). Crystalline is intuitive and encourages experimentation, and we love the Clean-up section which does exactly that when your experiments (inevitably) go too far.

While over 300 presets amply demonstrate how great Crystalline sounds, your own experiments will give you the biggest pay-off, safe in the knowledge that whatever you do will almost certainly sound great.
www.babyaud.io

Verdict

For Fabulously clean reverb
Can go completely wild and keep everything in time
Lovely easy controls
Great timing and ducking options

Against Presets would be better ordered by type

Powerful, easy to use and incredible to program – Crystalline sounds fab

9/10

LiquidSonics
Reverb Foundry Tai Chi $199

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

With both convolution and algorithmic elements, Tai Chi might well deliver a wide enough sonic range to justify its higher price…

Yet another reverb that incorporates both convolution and algorithmic elements, Tai Chi intends to bridge the gap between room reverb, sonic expansion and more cinema-aimed sound design via its extraordinary level of control. At heart, Tai Chi is a pulsing ensemble reverb, giving the means to amass spaces coated in chorus, and bringing fatter, multi-voiced sounds to your mix.

While standard Time, Width, Pre-Delay and Output Mix controls are all very much present and correct, the Multiband Reverb Time Multiplier is where Tai Chi excels. It allows you the ability to create lush ensemble reverbs that tantalisingly move and morph, something that will surely be of interest to the sound design-inclined. The shining beauty of Tai Chi lies in these lustrous chorused ensembles, bestowing the ability to fatten up guitar and synth sounds, yet without the occasionally jarring pitch oscillations that can create dissonance.

Tai Chi provides seemingly limitless spatial control, ensemble generation and all manner of twisting and warping abilities. From our initial tests, it's abundantly clear that Tai Chi is a richly rewarding route to sparkling character. Worth a look.
www.liquidsonics.com

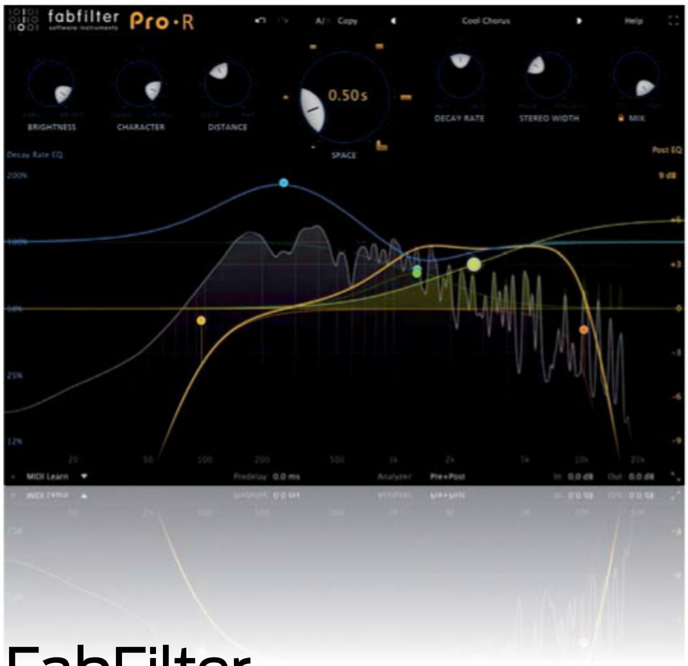
Verdict

For Lush ensemble reverb potential
Room-shaping scope is very wide
Surgical multiband editing ability
Hybrid reverb engine limitless in scope

Against A little on the pricey side

A ton of control and an indispensable sound design and stereo mixing tool

9/10



FabFilter
Pro-R £125

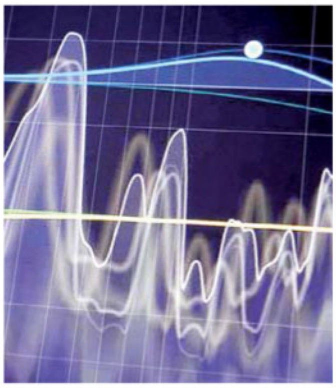
PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

FabFilter's plugins are, you guessed it, always fab, and this is one of the most loved 'verbs out there, for very good reason

FabFilter's reverb contender puts ease of use at the top of the agenda, with just six controls (plus dry/wet mix) governing a host of under-the-hood processes, including smoothly interpolated transitioning through "over a dozen" algorithms with the Space knob, which also sets the decay time from 0.2-10s, scalable from 0.1-20s with the Decay Rate control.

A six-band EQ is also onboard, and the innovative Decay Rate EQ works like a regular EQ, but with the response curve defining the decay time across the frequency spectrum – clever and hugely effective stuff.

www.fabfilter.com



Verdict

For Lovely, intuitive interface
Unified Space control works well
Decay Rate EQ is great

Against You might want more controls

Awesome-sounding reverb and one that is hugely enjoyable and rewarding to work with

9/10

Valhalla DSP
Valhalla Plate £50

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Valhalla make some of the best reverbs – and other effects – but this budget-friendly plugin is one of their best

Frankly, we could have chosen any from Sean Costello's amazing roster of reverb plugins for inclusion here, but to our minds, ValhallaPlate stands out as offering far more flexibility than the average plate reverb emulation – and that's not to mention that it sounds absolutely gorgeous.

You get 12 plate modes, each with its own colouration, character and stereo presence; Predelay, Decay (up to 30s), Size, Width and EQ controls provide ample shaping possibilities; and chorus-style LFO modulation (0.05-5Hz) can be dialled-in to thicken things up. Based on in-depth analysis of multiple EMT 140 plates, and representing ridiculous value for money, ValhallaPlate is utterly essential.

www.valhalladsp.com

Verdict

For Great choice of plates
Well organised presets
Simple interface
Adjustable plate size

Against None

A must-have reverb for any genre of music and effects toolbox

10/10

D16 Group **Spacerek** €79

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Simple, straight to the point and budget friendly, Spacerek is one of the most flexible reverbs you can afford right now

Like an increasing number of modern reverbs, D16 Group's Spacerek seems to have elements of both algorithmic and convolution reverbs mixed together – that is, it uses modelled spaces but gives you more control over them. However, where Spacerek differs is that it is designed to create those real-world spaces without the need for complex parameters and controls. Spacerek is capable of creating interesting and rich reverb spaces that don't sound unnatural, but still lets you push things further for some unique results.

Each of Spacerek's 114 reverb models has different virtual microphone, sound source and room size configurations, allowing for versatile sonic exploration. In the centre, you can set volume for three reverb stages – Direct sound, Early reflections and Late reflections – and alter the stereo Balance for each.

The latter can be done in Left/ Right format or in a Mid/ Side configuration. You could, say, splay your early reflections out in the stereo field to give your sound a sense of location while reining in the tail to make it a little more mono, keeping the mix focused.

The presets give you a large variety of spaces and some experimental effects to play with and really do demonstrate the power of Spacerek. And all in all, while it may not have a flight deck full of controls, Spacerek really is capable of making your sounds take off.

www.d16.pl

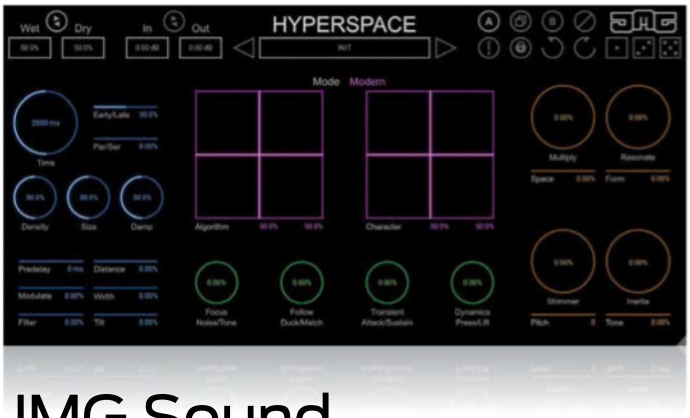
Verdict

For Lovely, varied sound
Relatively simple interface
Great Tilt EQ and Pre-Delay features

Against Some may wish for more controls

Relatively straightforward-looking reverb that hides a lot of power and flexibility, leading to fantastic and flexible results

9/10



JMG Sound **Hyperspace** €129

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Basic interface, yes, but Hyperspace delivers some incredible sounds, so never judge a reverb by its UI

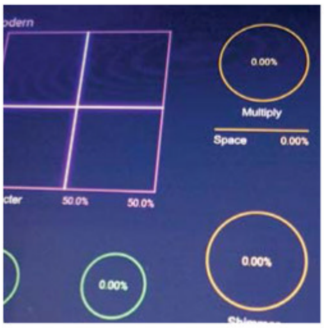
Hyperspace takes a flexible approach to the deployment of its onboard algorithms, enabling their control using a couple of XY pads. The Algorithm XY pad is the more subtle of the two, with Character adding greater influence to the tonal shape.

Hyperspace has a few more tricks up its sleeve. The orange section is home to four creative effects (Multiply, Resonate, Shimmer and Inertia). Respectively, these multiply the early reflections, apply comb filtering, add pitchshifting and freeze the reverb, and each includes a further effect-specific parameter. As you might imagine, these are pretty transformative.

There are more than 300 presets including some fabulous ones for traditional vocals, drums and instruments. And if you find that you do want to get creative but don't know where to start, the dice icons on the top bar provide you with three degrees of parameter randomisation.

Hyperspace is an incredibly rewarding reverb that excels at the creation of unique and creative spaces.

www.unitedplugins.com



Verdict

For Easy algorithm modification
Creative effects section
Simple, clean interface
Massive preset library

Against Number of parameters can be daunting

An incredibly flexible reverb capable of a broad range of sounds

9/10

Rob Papen
RP-Verb 2 $99

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Another reverb that has been with us a while, but this one has huge power under the bonnet and a matching big sound

Easier to get to grips with than its intimidatingly busy interface might suggest, RP-Verb 2's many processing stages take in distortion, chorus, and EQ alongside the central ER/LR/Reverb sections, and can be brought to life with the Envelope, Envelope Follower and LFO modulation sources; while the Reverser mixes forward and reverse reverbs to excellent effect.

Another sound design-orientated plugin that specialises in "hyper-real, scintillating" spaces suitable for modern pop and dance production, Rob Papen's second-gen marvel requires more care and attention than most but delivers results that you simply couldn't get any other way.

www.robpapen.com

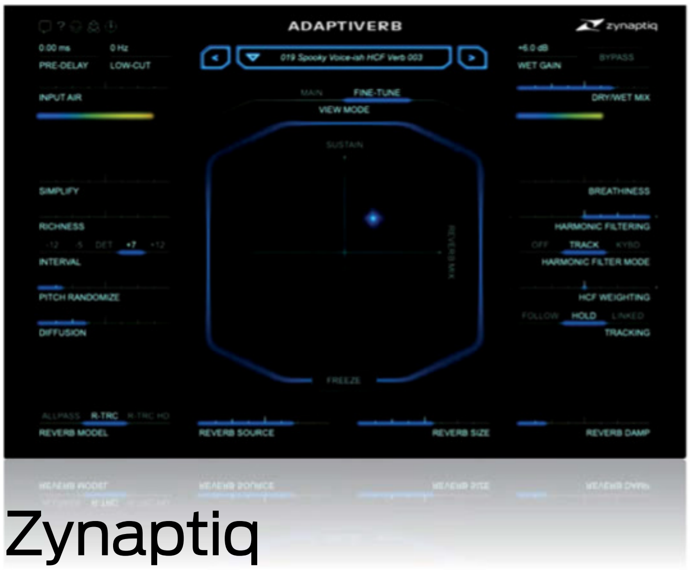
Verdict

For Semi-modular architecture
Reverser and modulation system are great
More than 500 presets

Against Diffusion control has gone

Ridiculously powerful and attractively-priced reverb plugin for the adventurous producer out there

8/10



Zynaptiq
Adaptiverb $249

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

A reverb with frankly magic-like power which is unlike any other in this round up, but is that worth the higher price tag?

Summarised by the developer as a "harmonic tracking resynthesis reverb" that does its thing "without obscuring the source", Adaptiverb deploys a machine learning algorithm (the Bionic Sustain Synthesiser, no less) to synthesise a reverb tail based on the characteristics of the incoming source material.

The upshot is an impressive symbiosis of the dry and wet signals, the exact tonal and frequency-based relationship between them adjusted using the Harmonic Contour Filter, which can even conform the tail to specific note pitches.

This might all come across as very 'sound design', but Adaptiverb is equally at home invoking smooth conventional spaces, making it every bit as versatile as it is futuristic.

www.zynaptiq.com

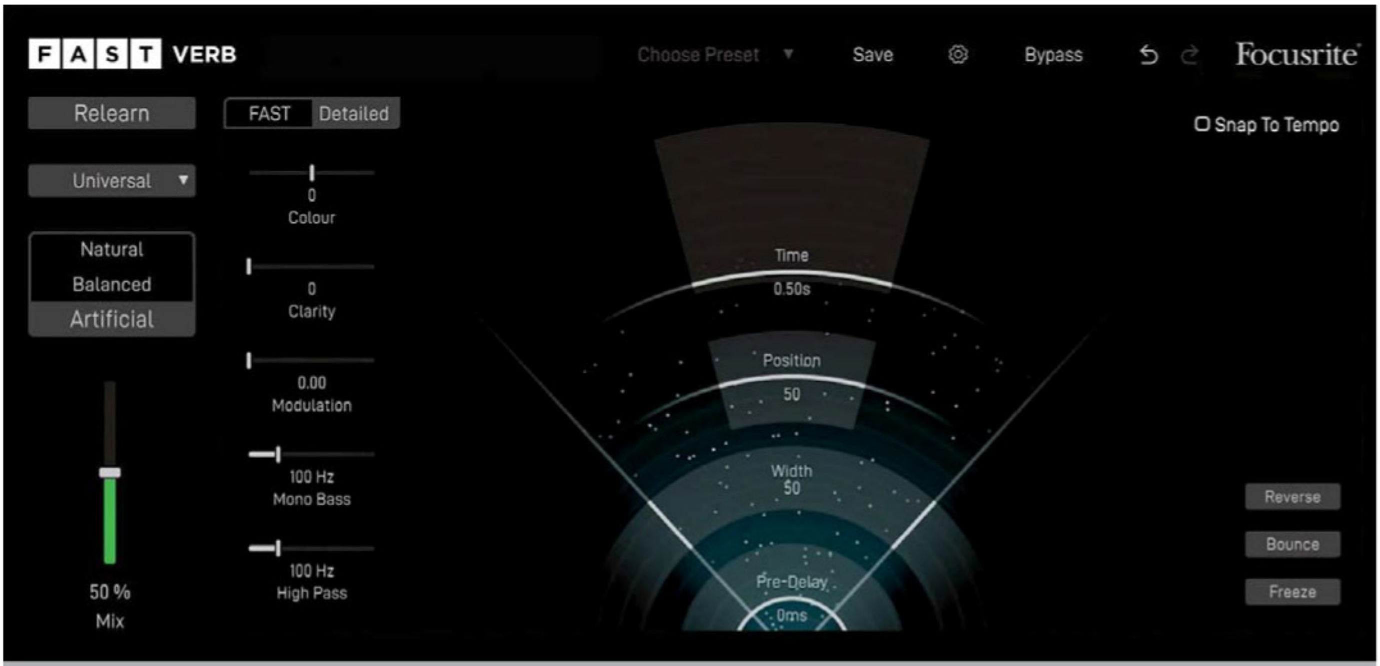
Verdict

For Genuinely innovative
Great for sound design
Massive library of excellent presets

Against Quite expensive

Unconventional and unique, this is a beautiful all-purpose reverb and rewarding sound-design tool

9/10



Focusrite FAST Verb $99

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

With elements of AI, Focusrite's FAST range of plugins makes adding effects easy, and Verb is a standout title

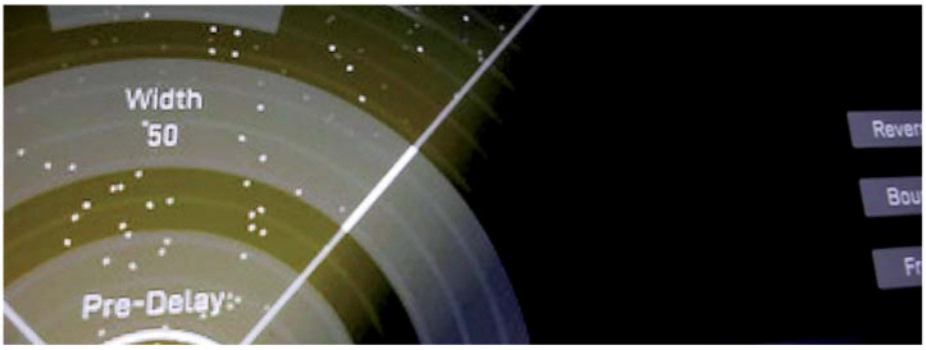
As with the previous FAST tools, one of the headline features of FAST Verb is the analysis tool powered by Sonible's AI tech. Simply play some audio into the plugin, hit Learn and the AI will suggest a reverb preset for you based on what it thinks will work best. Users can define a source type – from a list including drums, vocals, keys, guitar and more – and then tailor the reverb style more by choosing between Natural, Balanced and Artificial options.

FAST Verb has some great features that make it a deceptively handy creative effect. The interface is excellent, offering a clear visual representation of the main reverb parameters that responds dynamically to the output signal. There's also an advanced view that brings up sliders to adjust reverb colour, monophonic bass cutoff and a high-pass filter.

FAST Verb's results are best in Natural mode. It's great at generating subtle reverb effects you don't really notice until the plugin is disengaged – the kind that can add a realistic sense of space and depth to, for example, a DI'd guitar or synth.

What it excels at in conclusion, are either these 'natural' verbs or far-out creative effects. It isn't quite like anything else that's out on the market, and those capabilities are undoubtedly worth the price.

https://collective.focusrite.com



Verdict

For Great for instant 'natural' space
Tempo-locked and reversed effects are a lot of fun
Clear, very well-designed interface

Against Artificial and Balanced AI modes are less effective

A great reverb for AI-generated 'natural' reverbs or far-out creative tweaking

9/10

Eventide **Blackhole** $199

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

A reverb plugin that will literally take you out of this world and beyond. Blackhole will suck you in with its shimmering beauty

While the majority of reverbs in our list are primarily aimed at creating realistic rooms, Blackhole is specifically aimed at sound designers looking to realise wholly unreal spaces in their Mac, PC or iPad DAW.

The interplay between controls (most notably the bipolar Size and Gravity knobs) invites real-time manipulation, and the brilliant Hotswitch and Ribbon Controller jump and morph between two complete parameter states, for wild spatial switches and transitions. Definitely not the 'verb to turn to for conventional mix treatments, Blackhole is uniquely excellent at handling huge, evolving soundscapes and weird ambiences.
www.eventideaudio.com

Verdict

For Beautiful sound
Excellent real-time control
Good preset library

Against Quite pricey

Out-of-space reverb that has to be heard to be believed

9/10

2CAudio **Aether** £50

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Ignore the creaky old interface if you can, as this classic reverb is still capable of delivering some amazing sounds

An oldie but a goodie, 2CAudio's 2009 debut is still one of our go-to algorithmic reverbs, and although the GUI is looking decidedly lo-fi these days (please, 2C, at least make it scalable!), the virtual environments that Aether conjures have to be heard to be believed.

Fair bristling with knobs, the plugin offers an insane degree of control over the early and late reflections, including 33 transformative ER spaces and up to 120s decay time, as well as detailed frequency shaping (input and LR EQ), modulation, and tail envelope adjustment. Complex and deep, Aether is a true mixing and sound design powerhouse.
www.2caudio.com

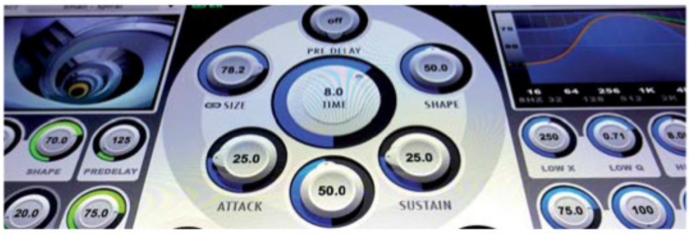
Verdict

For Fantastic sound quality
Great for both mixing and sound design
Excellent categorised presets
ER Space presets system is very cool

Against Ancient interface

It might look dated but this is an awesome algorithmic reverb

8/10



Nugen Audio **Paragon** £419

PLUGIN FORMATS: VST/AU/AAX/RTAS | **PLATFORM:** MAC, PC

A pro-level reverb at a pro-level price – Paragon works its wonder in three dimensions

Nugen Audio's Paragon has the honour of being the world's first 3D-compatible convolution reverb, but also has the kind of control that you'd usually find on an algorithmic reverb. It comes pre-loaded with room impulse response samples, but it's possible to re-shape these and alter the room size, decay levels, frequency damping and brightness. This all happens within the blink of an eye, with no noticeable artefacts.

From cavernous halls, gloomy churches, airy rooms and reflective clubs, the range of real spaces have been meticulously captured. These presets are easily labelled and aren't overwhelming in number – and that's kind of the point. They serve as good groundings to start your own journey into crafting the perfect nuanced space for your project. With up to 7.1.2 audio channels and Dolby Atmos compatibility, Paragon looks set to be all things to all people.

Nugen have crafted a reverb of remarkable scope, with the authenticity of the room sounds being at a truly impressive level.
https://nugenaudio.com

Verdict

For Impressive pro-level reverb
Huge scope to re-sculpt real rooms
Independent channel control

Against High price

Fuses the very best of both the physical and man-made worlds

9/10

Audio Ease **Altiverb 7** €499

PLUGIN FORMATS: VST/AU/AAX | **PLATFORM:** MAC, PC

Over two entire decades, Altiverb has developed into the best convolution emulation reverb ever

Incredibly, the world's first real-time convolution reverb plugin has lost none of its appeal since the launch of v1 in 2002.

At the heart of Altiverb 7 is a huge library of impulse responses precisely capturing the ambient qualities of a broad array of famous studio rooms, stadiums, halls, cathedrals, industrial locations, and more, as well as vintage reverb hardware, plates, etc.

Expensive, but worth every penny to the serious producer/engineer, this is the finest solution money can buy when it comes to placing acoustic instruments and vocals in thoroughly convincing real-world spaces.
www.audioease.com

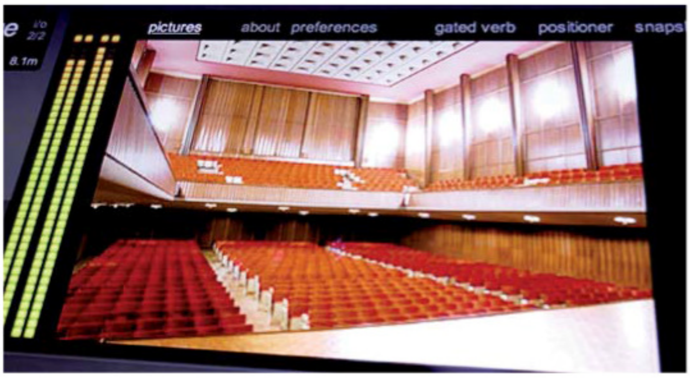
Verdict

For Unparalleled convolution solution
Huge number of real-world convolutions
Industry-standard convolution reverb

Against Interface could do with some kind of update
Expensive

One of the best – if not the best – convolution reverb plugins money can buy

9/10



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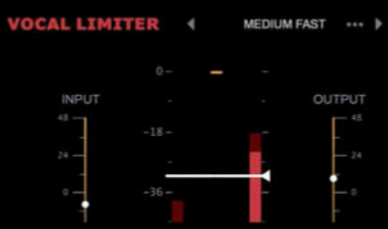
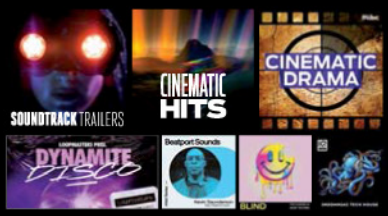


cm / free plugin

84 **WA PRODUCTION VOCAL LIMITER**
An extremely flexible vocal limiter is yours for free!



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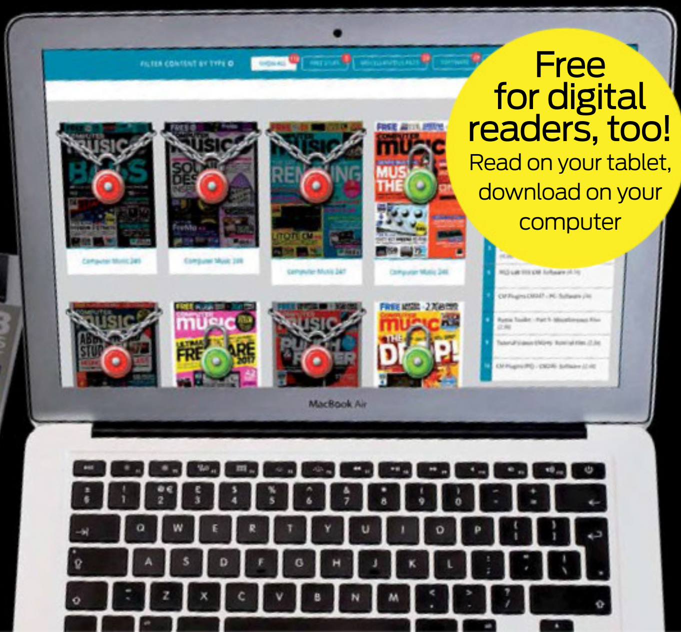

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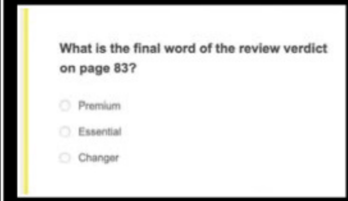

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W.A. PRODUCTION VOCAL LIMITER

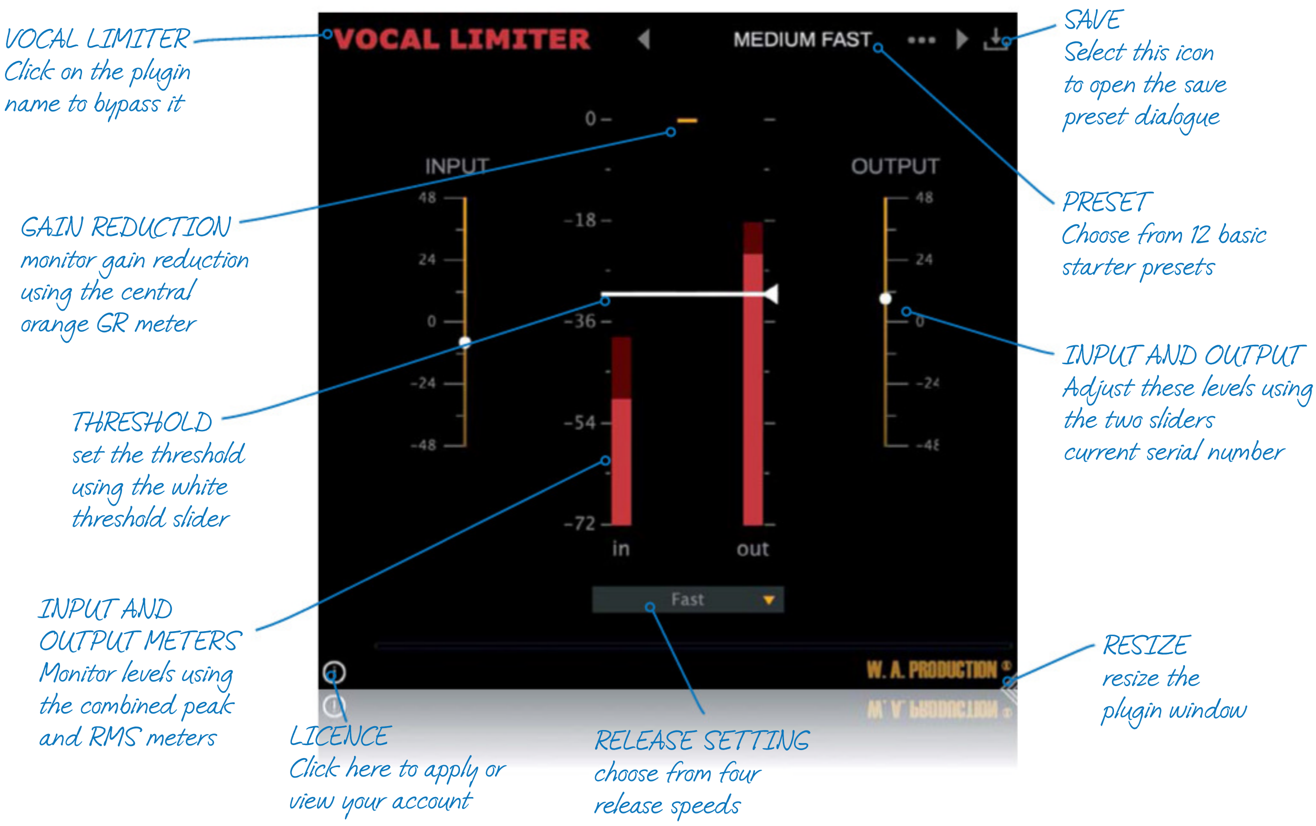
Get to know this month's free software gift

> **W. A. Production have built up an impressive array of audio plugins and sample packs perfect for music production and sound design and this month we have a new giveaway for one of their plugins…**

We're very lucky that W. A. Production have already created some special versions of their plugins for our CM Suite, including most recently the multiband tempo-synced delay, Multibender CM. This month we have a slightly different deal from the team as we're giving away a full version of their dynamics plugin, Vocal Limiter. This would normally set you back somewhere around $20 and it's yours absolutely free.

Vocal Limiter (VST, VST3, AU, AAX), as the name suggests, is a limiter that focuses on the vocal frequencies. It's designed to be the last stage in your vocal processing chain and is built for load and process simplicity. In this tutorial we'll show you how to claim and install your free copy of Vocal Limiter. Then we'll put it through its paces starting with a run through the features. Part of its design is that it focuses on the vocal frequencies, and has a small tail-off for the low frequencies, so we'll then run through some typical vocal examples. The plugin includes a bunch of presets, so next up we'll check out what's on offer. And finally, despite its vocal focus it's always great to move off the beaten track, so we'll try using Vocal Limiter as a regular dynamics processor.

As mentioned, W. A. Production has a vast array of music production products including Sylenth1 and Serum synth presets, task-specific sample packs and a host of plugins. And in typical W.A. fashion, pricing is competitive. So, if you like Vocal Limiter, why not check out their other products at **www.waproduction.com**



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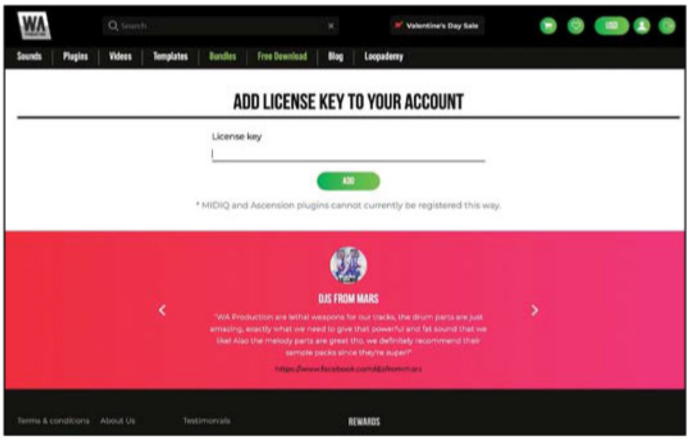
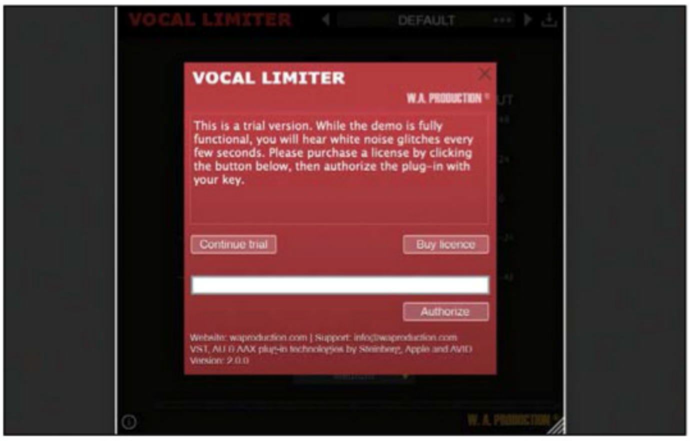
> Step by step 1. Getting started



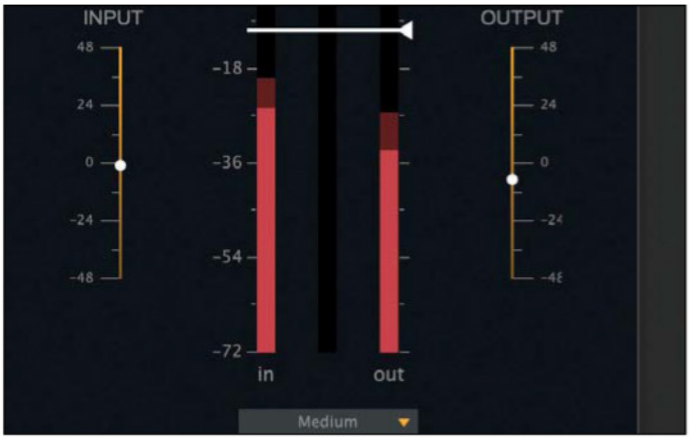
1 > Head to bit.ly/cm320downloads, fill out the form and grab your redemption code. Log into or create your W. A. Production account and register your code at www.waproduction.com/users/licenses. You'll get a confirmation email with your serial key.



2 > Go to the Orders section of your profile, select the Vocal Limiter entry and the Download Files option to grab the installer. Run the installer for your platform. When you first load an instance of Vocal Limiter, enter the serial number in the box to authorise it.

> Step by step 2. Familiarisation

1 > Now let's take a look at the features. We've created a fresh DAW track and loaded up an instance of Vocal Limiter. The plugin is pretty straightforward and is arranged with an input level slider on the left and output level slider on the right.



2 > This layout is replicated in the central metering area with red indicators for input on the left and output on the right. Meanwhile in the middle is an orange gain reduction meter. Also in the middle is the main threshold control, which is the white horizontal line.

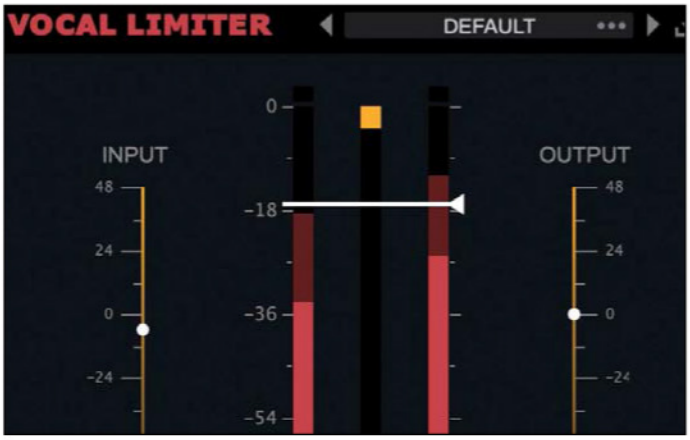
3 > A key aspect of Vocal Limiter is the release stage and this is handled by four presets. You'll find these in a drop-down menu below the meters. Also in a drop-down menu are the main presets which you'll find in the top menu bar.

4 > Finally, it's also worth noting that the plugin window can be freely rescaled from the bottom right hand corner. Also note that in typical W.A. Production style, you'll find the plugin name doubles as a bypass button.

> Step by step

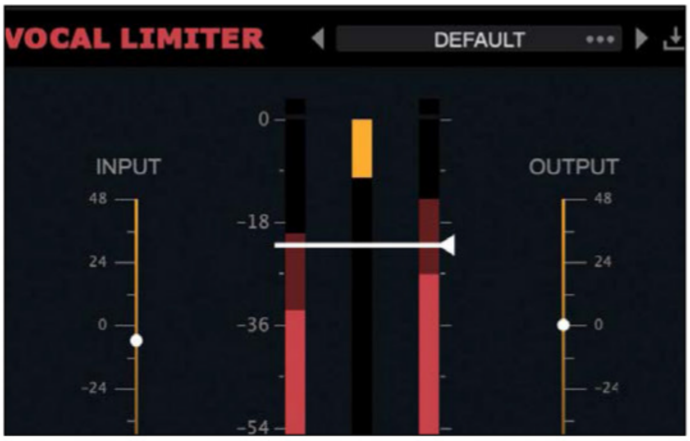
3. Lead vocals

1 > Let's try Vocal Limiter with some vocals. We've loaded up a vocal part on a fresh track and you can see from the accompanying waveform that the audio has plenty of headroom and is not already limited. Now we've loaded up Vocal Limiter as an insert on this track.



2 > For our vocal, we've adjusted the Input gain to about -6dB to give us some headroom to play with and then started adjusting the threshold control. With the threshold at about -16dB, we start to get some gain reduction and it's just grabbing the peaks.

3 > You'll notice that the output gain does not drop noticeably because of the automatic gain make up and this continues to be the case as we move the threshold lower. With the setting at about -36dB, the limiter gain reduction is pretty audible and metering up to about -30dB.



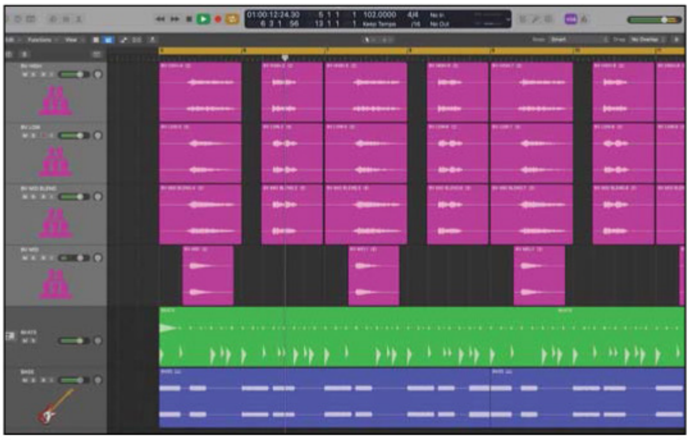
4 > Between these two threshold settings we can basically find a sweet spot that achieves the required control but without being too audible. For our example audio this is about -20dB, and this results in gain reduction of about -15dB.

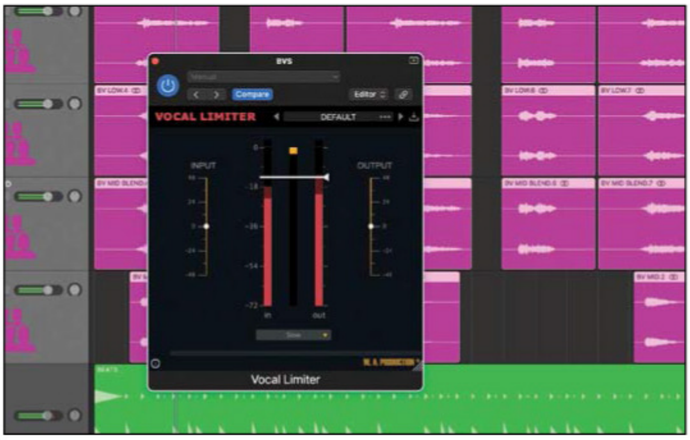
5 > If we now turn our attention to the release stage, the preset theme follows through into this as well. So far we've used the default release setting, which is Medium. However, the drop down menu includes three further options: Fast, Slow and Ultra Slow.

6 > Returning to our sweet spot setting above with the threshold at about -20dB we can cycle through the four release options. You'll see and hear straightaway there's a difference and in general terms the fastest setting is most coloured and the slowest the most natural.

> Step by step

4.Backing vocals and vocal snippets





1 > Having looked at the basics of processing a single vocal, let's now consider some other vocal situations. First up, backing vocal blends. Getting backing vocals to sit in a mix can be tricky. However, because they are not typically up front and featured, like the lead, it's often possible to apply quite hard processing.

2 > If this doesn't bring the vocals up sufficiently, we can adjust the release preset for a more aggressive audible outcome. Here we've gone for the Medium release setting. Then we've adjusted the threshold to achieve about 10dB of gain reduction.

3 > Here we've loaded up a stack of backing vocals and then grouped them together into a stereo bus. Our technique is to use a single instance of Vocal Limiter on the bus. This is really simple and we've set the threshold to achieve a few dB of gain reduction, using the Slow release setting for a less coloured effect.

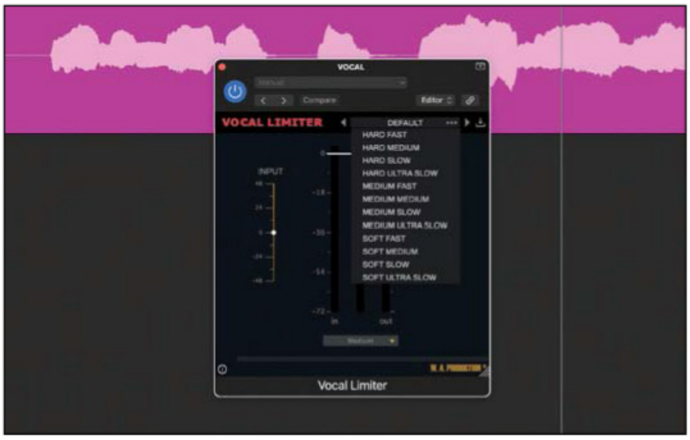
4 > Vocal Limiter is also great for processing smaller snippets of vocals or vocal samples, particularly if you want to give them a bit more edge. Let's try a few different sounds starting with a few shouts. The first sound has some delay in the tail and we've really hammered it hard to bring out this aspect.

5 > For our second snippet (Hey) we don't want to emphasise the tail too much. Trying out each of the release options reveals the most suitable is Fast, and with the threshold set to achieve moderate gain reduction of about 10dB, we've got a more punchy sound.

6 > Finally, we've got some noisy chopped up vocal samples. Here we've tried various settings to try and enhance the character in the samples, and eventually settled on the Ultra Slow release option, adjusting the threshold to achieve gain reduction of about 20dB.

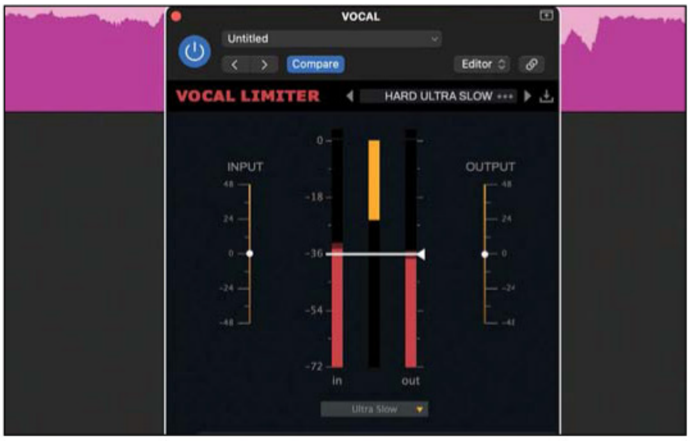
> Step by step

5. Presets



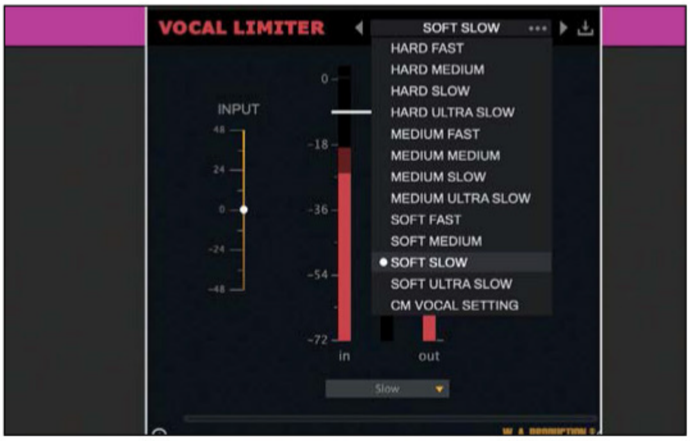
1 > Here we've returned to our original vocal, loading up an instance as an insert. The plugin loads in a default state with input and output at zero and the threshold at maximum. Click on the menu bar at the top and the drop down reveals 12 presets. Each is named to indicate its settings.

2 > You'll see you get four presets in each of the Hard, Medium and Soft categories. This simply indicates the threshold setting and these are -36dB, -18dB and -9dB respectively. The other part of the preset naming indicates which of the four release settings the preset uses: Fast, Medium, Slow and Ultra Slow.

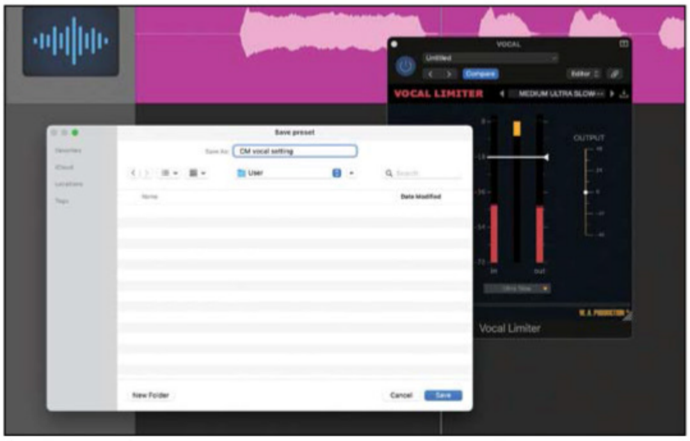


3 > Starting with the Hard settings, the first option (Hard Fast) delivers 36dB of gain reduction and a pumping release stage, making the effect very audible. The Hard Medium and Hard Slow presets deliver similar outcomes, albeit with slightly less pumping in the release stage. Hard Ultra Slow achieves quite substantial gain reduction but the overall effect is less audible.

4 > The Medium Fast preset delivers a balanced outcome and although the effect is audible, it doesn't sound overprocessed. For a more transparent result, the Slow and Ultra Slow release options are better, and our preferred choice would be the Medium Slow preset, which gives us about 10dB of gain reduction.



5 > The Soft presets have a high threshold so unless your input level is high, processing should be quite modest. In our case, the gain reduction meter shows only momentarily, but some processing is still audible and when we bypass the Vocal Limiter, it's obvious some processing is happening even if the meter doesn't show this.

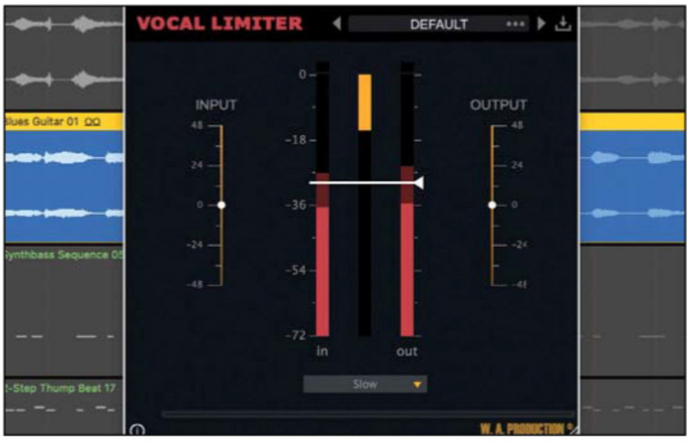


6 > If you find settings that work for you or simply want to replicate a setting elsewhere, you can save your Vocal Limiter settings as a preset. To access this option, select the arrow icon to the right of the preset list, select the User folder, give your preset a name and hit save.

> Step by step 6. Alternative uses

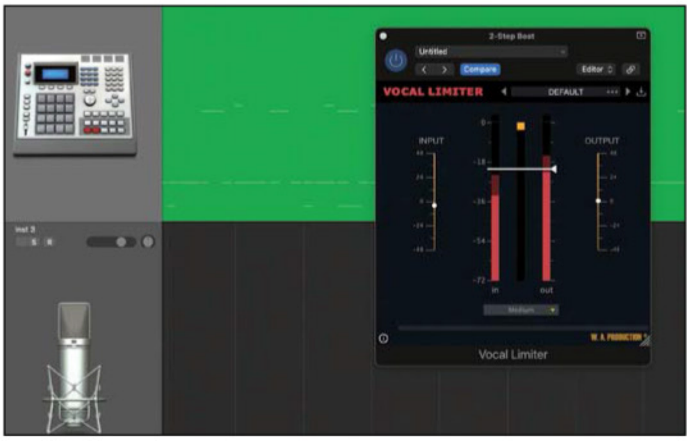
1 > As we've said, Vocal Limiter is tailored for vocal frequencies, but that doesn't mean you can't use it on other instruments and with a tailored attack and four release options, we should be able to get some decent processing. Let's run through a selection of sounds and see what's possible.

2 > First up, some guitars. Acoustic guitar really lends itself to dynamic processing and particularly where there is a picked component. Here we can easily add presence to our fast picked guitar part, and by using the Slow release setting, the outcome sounds quite natural.

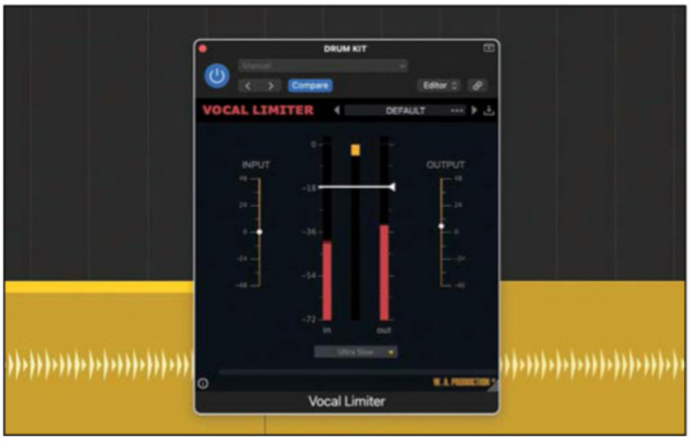


3 > For a clean electric guitar riff, we can actually apply quite a bit of limiting without it sounding unpleasant. Here we've used the Slow release setting and managed to achieve about 20dB of gain reduction, delivering a thicker and tighter-sounding part.

4 > Next up a synth bassline. The sound has plenty of low frequencies and the Vocal Limiter will reduce these slightly. When we first load it up, it's obvious the limiter attack is adding some noise to the sound. However, we can actually use this to our advantage and here with Medium release, we've set the threshold to add some click.



5 > We have a fast sample-based beat loop with a heavy 808 kick. As soon as we load up the Vocal Limiter, the kick loses some low frequencies. This isn't ideal but, once again, if we just want to dirty up the loop a bit, Vocal Limiter seems to be doing that, and even with a modest threshold we're adding presence.



6 > Next we have a live drum kit part. Here we've isolated the snare sound and used the Vocal Limiter to bring up the tail of the sound. Settings include the Ultra Slow release and we've reduced the threshold to achieve up to 15dB of gain reduction. **cm**

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Movie time!

As it's a cinematic theme this issue, what better than two new sample packs to build your own soundtracks? Download them from bit.ly/cm320downloads

Soundtrack Trailers

It's a soundtrack theme this issue! Robbie at Cyclick gets his popcorn and details his all-new sample pack…

"This sample pack pulls together the essential ingredients for a soundtrack trailer: pounding, giant drums, suspenseful prep piano chords and scratchy instruments (a violin and a concert zither).

"The chunky drums make use of pitchshifting, reverb, and compression, with a healthy dash of distortion along the way. The beats all feature two rounds of a 1-bar pattern followed by one or two bars of reverb decay.

"The prep piano produces two sets of indescribable chords (they'd be something like a diminished major 7th minor 2nd), so they're just listed as A, B, C, etc.

"The Evil Violin is a 3⁄4 size school cheapo I found in the loft. The bow is in good condition, but the violin has only two strings, so it was decided that this would not be a tuneful affair! Cue lots of scratching and scraping. Creepy.

"The zither's also seen better days; not tuned in a while so the less harmonious tones were sought out. It produced some huge sounds to treat."

There are more detail in Rob's PDF in the Samples download folder

SELECTED GEAR

3⁄4 size violin (only two strings)
Violin bow
Concert zither (barely tuned)
Telefunken AR-51 valve mic
Focusrite ISA828 preamps
Audio Orion 32 interface
Steinberg Nuendo 11
NI Kontakt 5

Cinematic Hits

Oli Bell from Groove Criminals gets his ticket to the sampling flicks and delivers this new pack…

"For our all-new sample pack this month, we've gone all cinematic. In it we have included some atmospheric textures/beds, stings, low-end rumbles and suitably epic piano samples.

"As usual we've mixed up using both hardware and software for these samples.

"We lent heavily into our Korg Triton hardware synth to bring you some of those special 1980s/1990s synth logo stings that we remember from old VHS tapes back in the day. We then gave these sounds a helping hand of wobbly delay and rich reverb effects courtesy of the Demedash T-120 delay and Old Blood Noise Minim.

"Piano-wise we used several of Native Instruments' excellent piano plugins, some very heavily processed. We also ended up using lots of samples taken from our deconstructed piano – this was great for string plucks and scrapes.

"Another new sonic find that helped to create some beautiful moving textures was SoundGhost's Scatter granular plugin, which we used over whatever we could shove through it!"

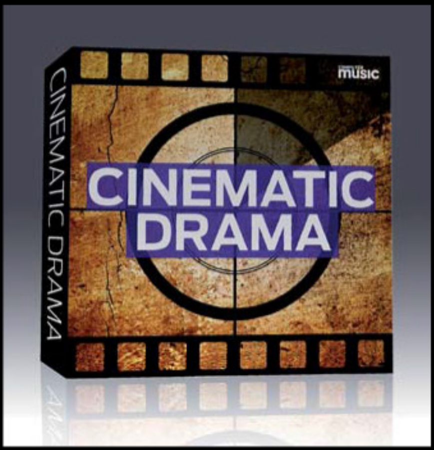
SELECTED GEAR

Korg Triton
Deconstructed piano
Demedash T-120 echo
Old Blood Noise Endeavors Minim
NI Noire, Una Corda and The Gentleman
Valhalla Supermassive
Valhalla Shimmer
Izotope Iris 2
SoundGhost Scatter
Various soft synths

FROM THE cm VAULT

Classic samples
Cinematic Drama

We've grabbed a vintage cinematic sample collection from the vault so you can get your tunes and soundtracks onto the A-list…



We're heading back to issue 229 of Computer Music for our classic samples, and continue the soundtrack theme.

Where would all those classic cinematic moments be without the soundtracks that set their mood? Fortunately, for every genius screenwriter or director, there's a talented musician to pen the perfect soundtrack. In a tribute to the tension and suspense of the silver screen, this pack brings it straight to your DAW, with 917 samples to use as you see fit. We tracked down the creators to find out how it was made…

Cyclick

Robbie Stamp hasn't been to the cinema since his incident at *Saw II*. To entice him back to the silver screen, we told him they were re-running *Mean Girls*, and he couldn't resist. During the adverts, we had a chat about this month's pack.

"This sample pack will add cinematic tension and movement to your productions," he says, bobbing his feet up and down on the sticky floor. "There are rhythmic elements, both percussive and tonal, as well as a few atmospheric loops and a set of instrumental lines. The percussive side is taken care of by five drum sets and eight synth arpeggiator percussion sets. Both sets of patches were heavily treated with modulation effects, delays and EQ/dynamics to enhance their rhythmic qualities."

Robbie finishes his second pouch of Revels and it's time for our feature presentation.

"For instrument samples, you get guitar and piano, plus some meaty bass synth arpeggios and some piano/string pad sounds," screams Robbie as he desperately tries to repress the experience. "Most of the loops have been made with very short fades to prevent clicking, but the Metallic Atmos loops were made with their crossovers mid-file, so their starts and ends may look like clips, but they will loop perfectly – just add fades to the first and last instances!"

Groove Criminals

We caught up with Oli Bell in his trailer at Pinewood Studios, where he's working on the soundtrack to the forthcoming Evan Davis biopic starring Nicholas Cage – at least, that's what he told us. Oli loops a low, sustained double bass sample to set the mood, and then begins his monologue…

"All the beats were processed using gates and filters to add a choppy, urgent edge," he says wistfully, holding the back of his hand to his forehead. "We also employed a thick layer of reverb and delay with some occasional down-pitching to add oomph. We used quite a lot of traditional gated reverb for effect, courtesy of our battered Peavey Univerb 2.

"The impacts were created by layering things like kick drums, Foley, noise, then processing them with huge washes of reverb. The stings are similar but feature sounds that have been reversed, modulated and messed with."

Oli approaches ever nearer, until he comes into extreme close-up range. It's an awkward moment. He continues to tell us about the pack.

"There are synth materials such as sound beds, scapes, electronic loops and pads, made with a mixture of hardware and software mono and poly synths, and drenched with effects like panning, filtering and delay.

"There's also a collection of 'scene setters' that mix non-synth sounds like electric bass and strings with synthesised tones and riffs, creating something that mixes up familiar and modern takes on the soundtrack genre."

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- **46** bass, synth and rhythmic loops
- **27** drama and discordant loops
- **48** piano, guitar and string loops
- and more…

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Loopmasters

Loopmasters cm320 samples

This month's demo sample selection highlighting Loopmasters' latest releases

01 **Blind Audio** Psychedelic Acid Techno
02 **Beatport Sounds** Kevin Saunderson - Past Present & Future
03 **HY2ROGEN** Future Rave Phenomenon
04 **Ghost Syndicate** Epicenter: Drum & Bass
05 **IQ Samples** Insomniac Tech House
06 **Loopmasters** Dynamite Disco

cm/video

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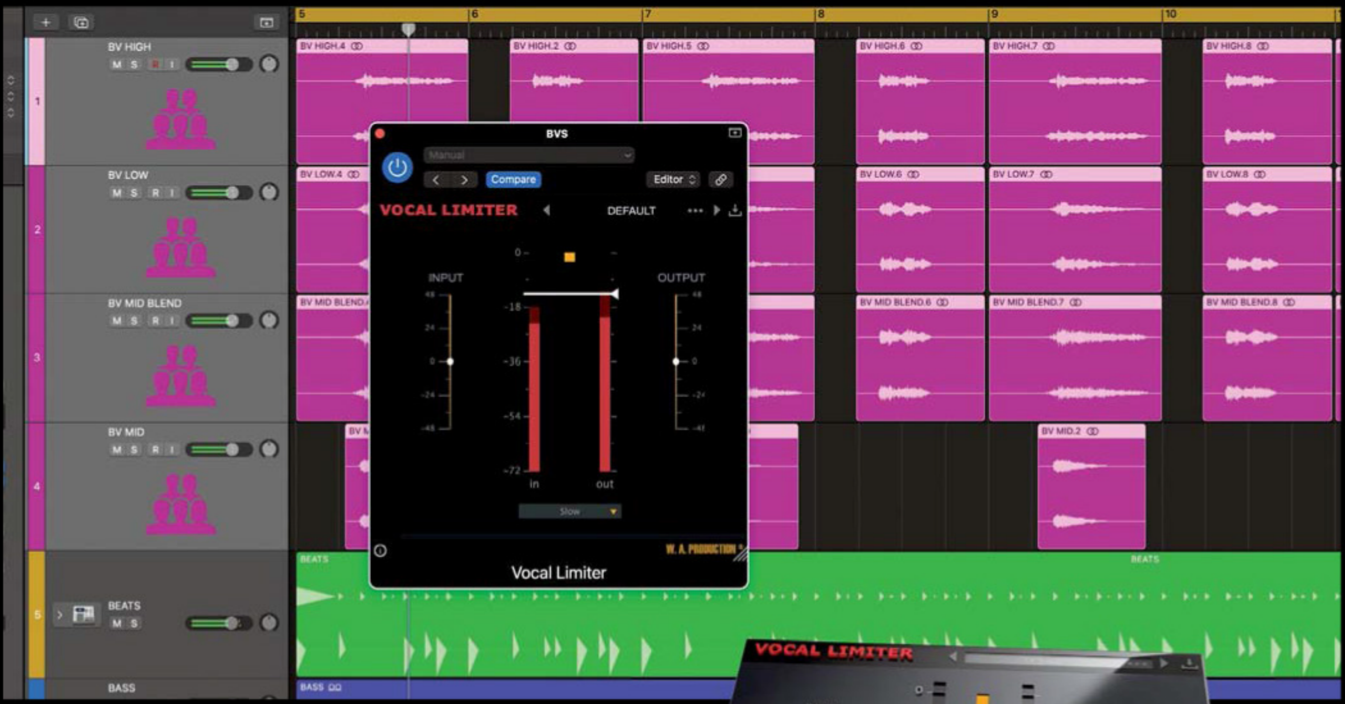

YOUR FREE PLUGIN

How to download and use your superb Vocal Limiter

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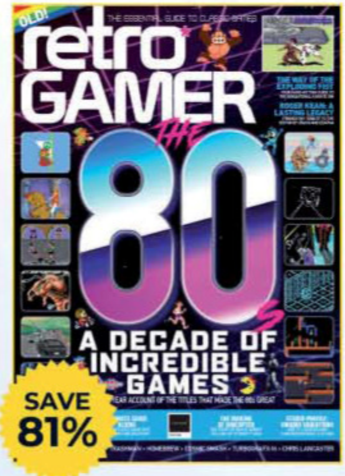

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COMPUTER MUSIC

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